	STATE OF UTAH  DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING  AMENDED REPORT  AMENDED REPORT												
	APPLICATION FOR PERMIT TO DRILL							1	1. WELL NAME and NUMBER RW 5C4-23B				
2. TYPE (	OF WORK	DRILL NEW W	ELL ( REE	NTER P&A W	ÆLL DEEPEN W	/ELL		3	3. FIELD OR WILDCA	r RED WA	SH		
4. TYPE (	OF WELL		Gas Well		Methane Well: NO				5. UNIT or COMMUNI	TIZATION A		NT NAM	E
6. NAME	OF OPERATO	२		ENERGY CO				7	7. OPERATOR PHONE				
8. ADDRE	ESS OF OPERA	TOR			Vernal, Ut, 84078			9	O. OPERATOR E-MAII			om	
	RAL LEASE NU		11002 Last 17	11.	. MINERAL OWNERSH	IP			12. SURFACE OWNER		e qepres.c		
		UTU082	12 - 'fee')		FEDERAL (III) INDIA	AN () STATE (	) FEE(		FEDERAL INI	DIAN ()	STATE (		E(_)
		FACE OWNER (if							16. SURFACE OWNE			·	
IJ. ADDI	VESS OF SUKI	ACE OWNER (III	JOX 12 = 166 /	10						X L-WAIL (I	1001 12 -	. 166 )	
	AN ALLOTTEE 2 = 'INDIAN')	OR TRIBE NAME		MU	. INTEND TO COMMIN JLTIPLE FORMATIONS YES (Submit Co			_	VERTICAL DI	RECTIONAL	📵 но	ORIZONT	AL 🔵
20. LOC	ATION OF WE	LL		FOOT	AGES	QTR-QTR	SECT	TION	TOWNSHIP	RAN	GE	ME	RIDIAN
LOCATI	ON AT SURFA	CE		1749 FSL	2116 FWL	NESW	23	3	7.0 <b>S</b>	23.0	) E		S
Top of I	Uppermost Pro	oducing Zone		2483 FNL	341 FWL	SWNW	23	3	7.0 S	23.0	Ε		S
At Tota	l Depth			2483 FNL	341 FWL	SWNW	23	3	7.0 S	23.0	E		S
21. COU	NTY	UINTAH		22.	. DISTANCE TO NEAR	EST LEASE LINE (Fe	et)	3	23. NUMBER OF ACR	ES IN DRILL 1280		•	
					. DISTANCE TO NEAR pplied For Drilling or		pleted) MD: 11476 TVD: 11141						
27. ELEV	ATION - GROU	JND LEVEL		28.	. BOND NUMBER		29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE						
		5625			Hole Casing	end Cement Info	rmation			A36125 / 4	9-2153		
String	Hole Size	Casing Size	Length	Weight	Grade & Thread		I		Cement		Sacks	Yield	Weight
Surf	12.25	9.625	0 - 3828	40.0	N-80 LT&C	0.0	Ha	alliburtor	Light , Type Unkı	nown	460	3.12	11.0
							Hall	liburton F	Premium , Type Ur	nknown	270	1.47	13.5
I1	8.5	4.5	0 - 6428	11.6	HCP-110 LT&C	9.5			No Used		0	0.0	0.0
Prod	7.875	4.5	0 - 11476	11.6	HCP-110 LT&C	10.5	⊔ <i>.</i>	alliburtor	No Used  Iliburton Light , Type Unknown		670	0.0 3.18	0.0 11.0
1100	7.073	4.5	0 - 11470		/ HOI - HO ETGO	10.5			<u> </u>			1.65	13.5
			1	7	AT	TACHMENTS							
	VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES												
<b>I</b> ✓ v	VELL PLAT OR	MAP PREPARED	BY LICENSED S	URVEYOR O	R ENGINEER	<b>✓</b> COMF	PLETE DRI	ILLING PL	AN				
AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)						FORM	FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER						
DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)  TOPOGRAPHICAL MAP													
NAME Jan Nelson TITLE Permit Agent					nt	PHONE 435 781-4331							
SIGNATURE DATE 01/31/2					<b>DATE</b> 01/31/201	2		EMAIL ja	an.nelson@qepres.cor	n			
	MBER ASSIGNE 04752327				APPROVAL		Broogfill						
								Pe	rmit Manager				

QEP Energy Company

RW 5C4-23B

Uintah County, Utah

SHL: 1749 FSL & 2116 FWL, Section 23, T7S, R23E BHL: 2483 FNL & 341 FWL, Section 23, T7S, R23E

#### DRILLING PROGRAM

# ONSHORE OIL & GAS ORDER NO. 1 Approval of Operations on Onshore Federal Oil and Gas Leases

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil & Gas No. 1, and the approved plan of operations. The operator is fully responsible for the actions of its subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

# 1. <u>Formation Tops</u>

The estimated top of important geologic markers are as follows:

Formation Name	TVD (ft, RKB)	MD (ft, RKB)
Duchesne River/Uintah	0	0
Green River	2865	2971
Mahogany	3775	3775
Estimated Btm of Mod Saline Water	5516	5788
Wasatch	6118	6428
Mesaverde	8318	8653
Sego	10841	11176
TD	11141	11476

## 2. Anticipated Depths of Oil, Gas, Water, and Other Mineral Bearing Zones

The estimated depths at which the top of the anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered as follows:

<b>Formation Name (Substance)</b>	Depth (ft, TVD)	Depth (ft, MD)
Green River (Oil)	2865	2971
Wasatch (Gas)	6118	6428
Mesaverde (Gas)	8318	8653
Sego (Gas)	10841	11176

All fresh water and prospectively valuable minerals encountered during drilling will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

RW 5C4-23B 8-Point Drilling Plan Page 1 of 9 Created: January 5, 2012

QEP Energy Company RW 5C4-23B Uintah County, Utah

SHL: 1749 FSL & 2116 FWL, Section 23, T7S, R23E BHL: 2483 FNL & 341 FWL, Section 23, T7S, R23E

All water shows and water-bearing sands will be reported to the BLM in Vernal, Utah. Copies of State of Utah form OGC-8-X are acceptable. If flows are detected, samples will be submitted to the BLM along with any water analyses conducted. Fresh water will be obtained from Wonsits Valley water right A36125 (which was filed on May 7, 1964) or Red Wash water right # 49-2153 (which was filed on March 25, 1960). It was determined by the Fish and Wildlife Service that any water right number filed before 1989 is not depleting to the Upper Colorado River System, to supply fresh water for drilling purposes. All water resulting from drilling operations will be disposed of at LaPoint Recycling and Storage in Section 12, T5S R19E of Uintah County, UT or Red Wash Disposal site; SESE, Section 28, T7S, R23E or West End Disposal Site; NESE, Section 28, T7S, R22E.

# 3. Operator's Specification for Pressure Control Equipment

- A. An 11" 5000 psi double ram with blind rams and pipe rams, annular preventer and drilling spool or BOP with 2 side outlets.
- B. All BOP connections subject to pressure shall be flanged, welded or clamped.
- C. Kill line (2" min), 2 choke line valves (3" min), choke line (3" min), 2 kill line valves (2" min) and a check valve, 2 chokes with one remotely controlled from rig floor and a pressure gauge on choke manifold.
- D. Upper and Lower Kelly cock valves with handles and safety valve and subs to fit all drill string connections.
- E. IBOP or float sub available.
- F. Fill up line must be installed above the uppermost preventer.
- G. Ram type preventers and associated equipment shall be tested to approved stack working pressure if isolated by test plug or to 50 percent of internal yield pressure of casing whichever is less. BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc..., for a 5M system and individual components shall be operable as designed.

RW 5C4-23B 8-Point Drilling Plan Page 2 of 9 Created: January 5, 2012

**QEP Energy Company** 

RW 5C4-23B

Uintah County, Utah

SHL: 1749 FSL & 2116 FWL, Section 23, T7S, R23E BHL: 2483 FNL & 341 FWL, Section 23, T7S, R23E

# 4. <u>Casing Design:</u>

Hole	Csg.	Top	Bottom	Wt.	Grade	Thread	Cond.	Expected
Size (in)	Size	(MD)	(MD)	(ppf)				MW(ppg)
22	16	Sfc	40	Steel	Conductor	None	Used	N/A
12.25	9.625	Sfc	3828	40	N-80	LTC	New	Air
8.5	4.5	Sfc	6428	11.6	HCP-110	LTC	New	9.5
7.875	4.5	Sfc	11476	11.6	HCP-110	LTC	New	10.5

Casing Strengths							
OD (in)	Wt (ppf)	Grade	Thread	Collapse (psi)	Burst (psi)	Tensile (kips, min)	
9.625	40	N-80	LTC	3090	5750	727	
4.5	11.6	HCP-110	LTC	8830	10710	279	

## **Casing Design Factors**

\*The casing prescribed above meets or exceeds the below listed design factors.

Burst: 1.2 Collapse: 1.2 Tension: 1.6

Maximum anticipated mud weight: 10.5 ppg Maximum anticipated surface treating pressure: 7,200 psi

# 5. <u>Cementing Program</u>

# 9-5/8" Surface Casing:

	Lead	<u>Tail</u>
Top of Slurry (ft, MD):	0	3000
Bottom of Slurry (ft, MD):	3000	3000
Weight (ppg):	11.0	13.5
Yeild (ft <sup>3</sup> /sk):	3.12	1.47
% Excess (Open Hole Only):	50%	50%
Volume (ft <sup>3</sup> ):	1410	389
Volume (Sacks):	460	270

RW 5C4-23B 8-Point Drilling Plan Page 3 of 9 Created: January 5, 2012

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QEP Energy Company

RW 5C4-23B

Uintah County, Utah

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4-1/2" Production Casing\*:

	Lead	<u>Tail</u>
Top of Slurry (ft, MD):	3000	8653
Bottom of Slurry (ft, MD):	8653	11476
Weight (ppg):	11.0	13.5
Yeild (ft <sup>3</sup> /sk):	3.18	1.65
% Excess (Open Hole Only):	50%	50%
Volume (ft <sup>3</sup> ):	2128	968
Volume (Sacks):	670	590

<sup>\*</sup>Final cement volumes to be calculated from caliper log, if run.

#### 6. Auxiliary Equipment

- A. Kelly Cock yes
- B. Float at the bit Yes
- C. Monitoring equipment on the mud system PVT/Flow Show
- D. Full opening safety valve on the rig floor Yes
- E. Rotating Head Yes
- F. Request for Variance:

Drilling surface hole with air:

A variance from 43 CFR 3160 Onshore Oil and Gas Order #2, Section III Requirements, subsection E. Special Drilling Operations is requested for the specific operation of drilling and setting surface casing on the subject well with a truck mounted air rig. The variance from the following requirements of Order #2 is requested because surface casing depth for this well is 50' or deeper into the Mahogany Bench formation and high pressures are not expected.

- 1. **Properly lubricated and maintained rotating head** A diverter system in place of a rotating head. The diverter system forces the air and cutting returns to the reserve pit and is used to drill the surface casing.
- 2. **Blooie line discharge 100 feet from wellbore and securely anchored** the blooie line discharge for this operation will be located 50 to 70 feet from the wellhead. This reduced length is necessary due to the smaller location size to minimize surface disturbance.

RW 5C4-23B 8-Point Drilling Plan Page 4 of 9 Created: January 5, 2012

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- 3. Automatic igniter or continuous pilot light on blooie line a diffuser will be used rather than an automatic pilot/igniter. Water is injected into the compressed air and eliminates the need for a pilot light and the need for dust suppression equipment.
- 4. Compressors located in the opposite direction from the blooie line a minimum of 100 feet from the wellbore compressors located within 50 feet on the opposite side of the wellbore from the blooie line and is equipped with a 1) emergency kill switch on the driller's console, 2) pressure relief valves on the compressors, 3) spark arrestors on the motors.
- 5. Well Kill Fluid A suitable amount of water and weighting agents will be available in the reserve pit during air drilling operations to kill the well, if necessary. No overpressured zones are expected in the area.
- 6. **Deflector on the end of the blooie line** QEP will mount a deflector unit at the end of the blooie line for the purpose of changing the direction and velocity of the air and cuttings flow into the reserve pit. Changing the velocity and direction of the cuttings and air will preserve the pit liner. In the event the deflector washes out due to erosion caused by the sand blasting effect of the cuttings, there will be no problem because the deflector is mounted on the very end of the blooie. A washed out deflector will be easily replaced.
- 7. **Flare Pit** there will be no need of a flare pit during the surface hole air drilling operation because the blooic line is routed directly to the reserve pit. When the big rig arrives for the main drilling after setting surface casing, a flare box will be installed and all flare lines will be routed to the flare box.
- G. Drilling below the 9-5/8" casing will be done with water based mud. Maximum anticipated mud weight is 10.5 ppg.
- H. No minimum quantity of weight material will be required to be kept on location.
- I Gas detector will be used from intermediate casing depth to TD.

# 7. Testing logging and coring program

- A. Cores none.
- B. DST none anticipated
- C. Logging Mud logging Intermediate Casing to TD OH Logs: GR-SP-Induction, Neutron Density.
- D. Formation and Completion Interval:

RW 5C4-23B 8-Point Drilling Plan Page 5 of 9 Created: January 5, 2012

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- Stimulation will be designed for the particular area of interest as

encountered.

# 8. <u>Anticipated Abnormal Pressures and Temperatures, Other Potential Hazards</u>

No abnormal temperatures or pressures are anticipated.

Maximum anticipated bottom hole pressure (approx, psi): 6083

Maximum anticipated bottom hole temperature (approx, deg F): 210

H2S has not been encountered in other wells drilled to similar depths in the general area.



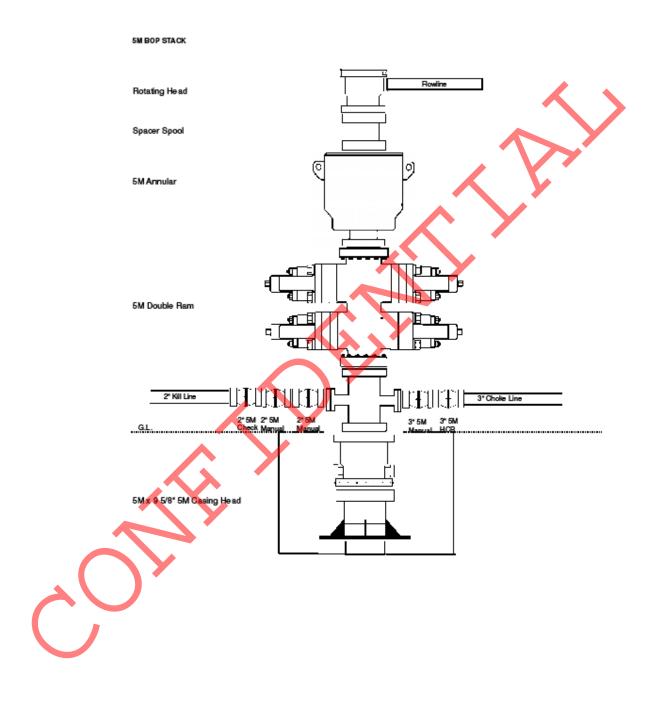
RW 5C4-23B 8-Point Drilling Plan Page 6 of 9 Created: January 5, 2012

QEP Energy Company

RW 5C4-23B

Uintah County, Utah

SHL: 1749 FSL & 2116 FWL, Section 23, T7S, R23E BHL: 2483 FNL & 341 FWL, Section 23, T7S, R23E

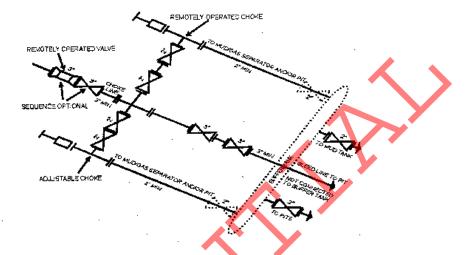


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RW 5C4-23B

Uintah County, Utah

SHL: 1749 FSL & 2116 FWL, Section 23, T7S, R23E BHL: 2483 FNL & 341 FWL, Section 23, T7S, R23E



5M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

[54 FR 39528, Sept. 27, 1989

Created: January 5, 2012

QEP Energy Company

RW 5C4-23B

Uintah County, Utah

SHL: 1749 FSL & 2116 FWL, Section 23, T7S, R23E BHL: 2483 FNL & 341 FWL, Section 23, T7S, R23E

#### WELLBORE DIAGRAM

General Information					
Pad	23-23B				
Pod	4				
Elevation, GL	5625				
Elevation, RKB	5641				

Geologic Prognosis					
<u>Formation</u>	TVD	MD			
Duchesne River/Uintah	0	0			
Green River	2865	2971			
Mahogany	3621	3775			
Est Btm of Mod Saline Water	5516	5788			
Wasatch	6118	6428			
Mesaverde	8318	8653			
Sego	10841	11176			
TD	11141	11476			

Hole Size	From (MD)	To (MD)
12.25	0	3828
8.5	3828	6428
7.875	6428	11476

Directional Information					
KOP:	500	ft			
Departure:	2060	ft			
Azimuth:	300.55	deg			

Casing Information						
Size	Wt	Grade	Connection	Depth (MD)		
9.625	40	N-80	LTC	3828		
4.5	11.6	HCP-110	LTC	11476		

<b>Conductor Information</b>						
Conductor set @	40					
Cemented to Surface						

Surface Cement								
•	Top (MD)	Wt	Volume					
		(ppg)	(Sacks)					
Lead	0	11	460					
Tail	3000	13.5	270					

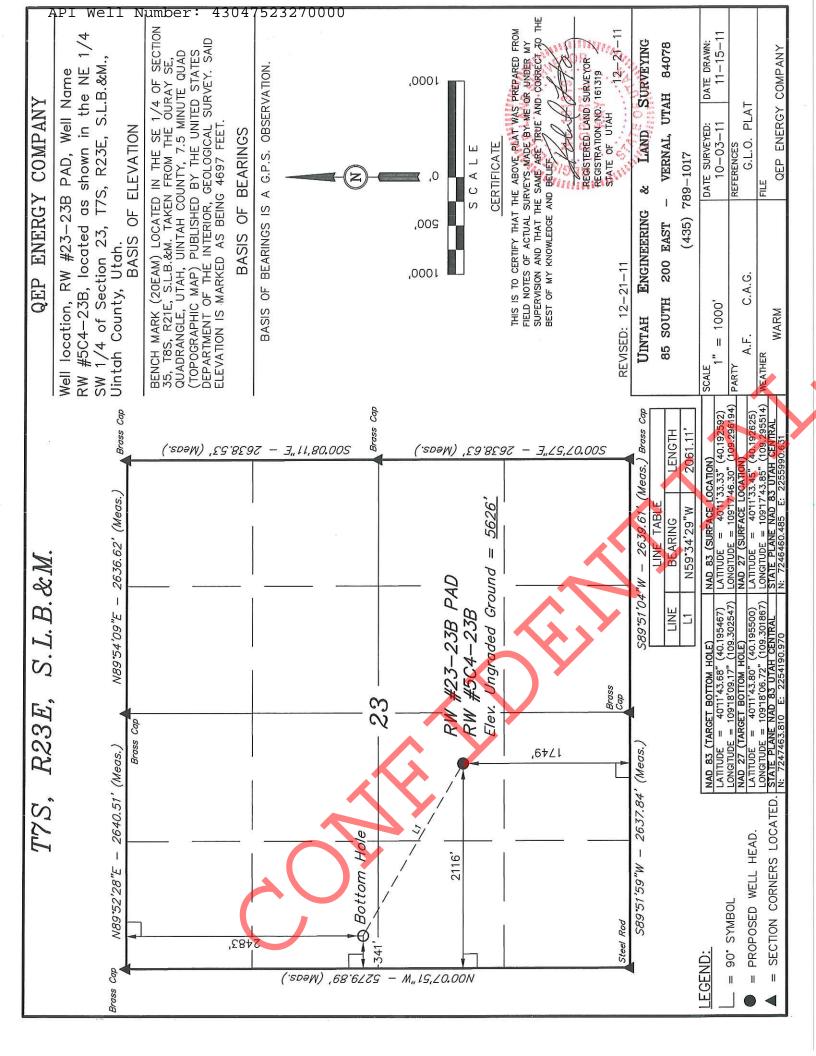
<b>Production Cement</b>								
Top (MD) Wt Volume								
		(ppg)	(Sacks)					
Lead	3000	11	670					
Tail	8653	13.5	590					

RW 5C4-23B 8-Point Drilling Plan

Page 9 of 9

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Created: January 5, 2012



# **QEP ENERGY COMPANY**

RW #23-23B PAD

LOCATED IN UINTAH COUNTY, UTAH SECTION 23, T7S, R23E, S.L.B.&M.

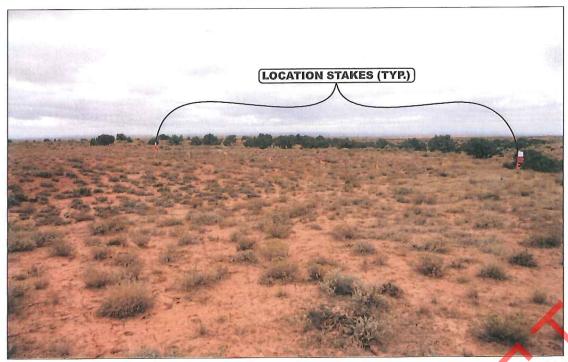


PHOTO: VIEW OF LOCATION STAKES

CAMERA ANGLE: SOUTHERLY

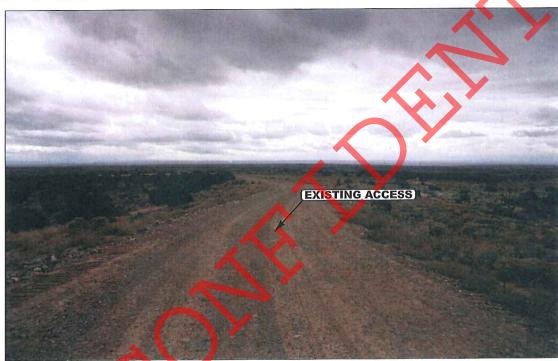


PHOTO: VIEW OF EXISTING ACCESS

**CAMERA ANGLE: SOUTHERLY** 

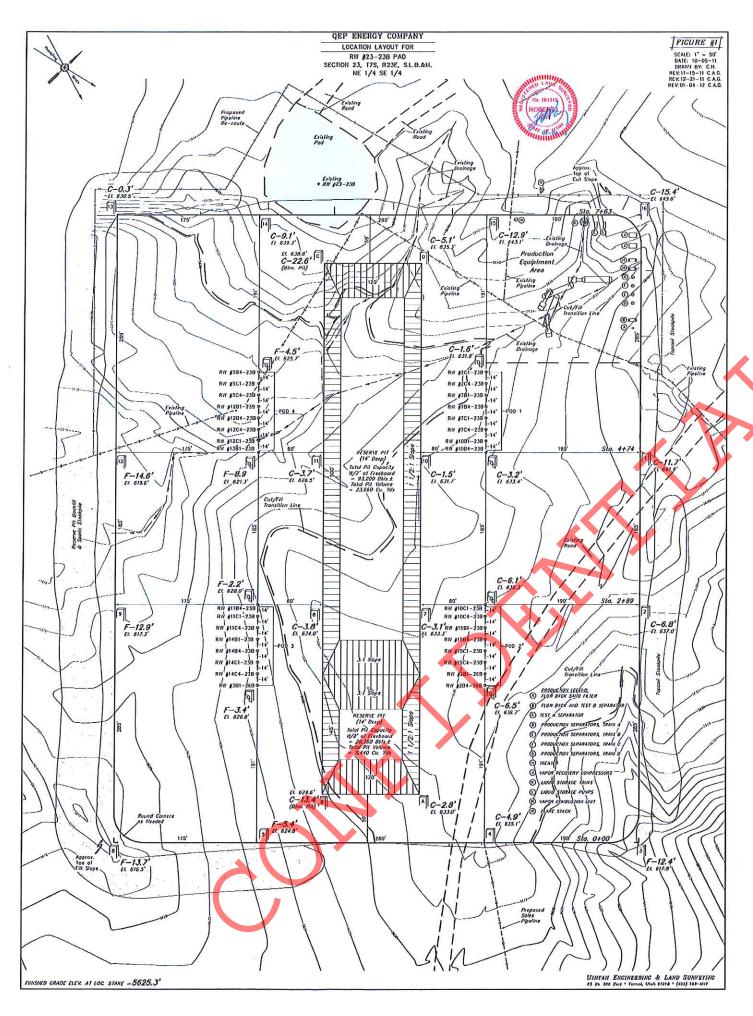


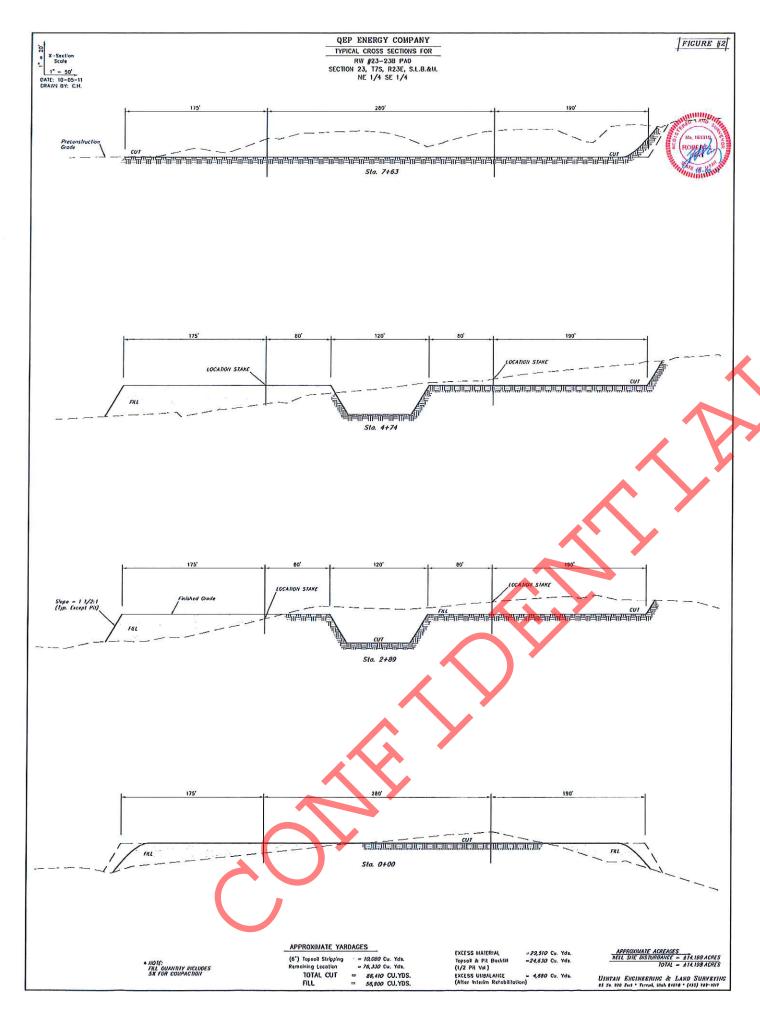
Uintah Engineering & Land Surveying 85 South 200 East Vernal, Utah 84078 (435) 789-1017 \* FAX (435) 789-1813

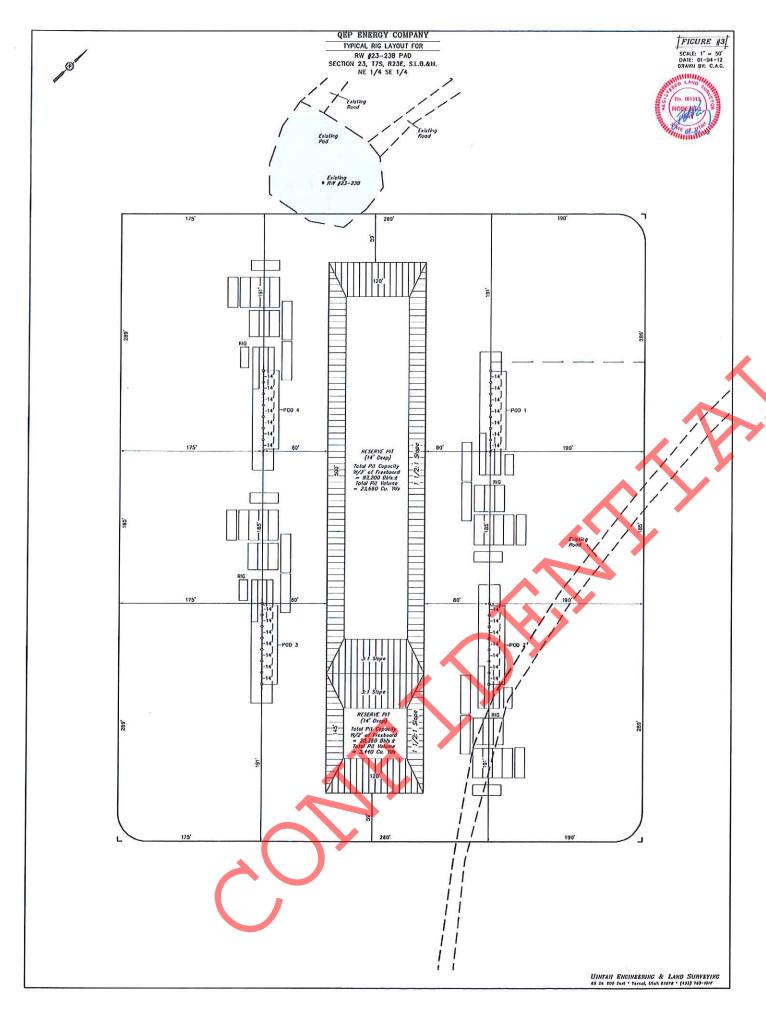
**LOCATION PHOTOS** 

**РНОТО** 

TAKEN BY: A.F. | DRAWN BY: A.W. | REVISED: 00-00-00





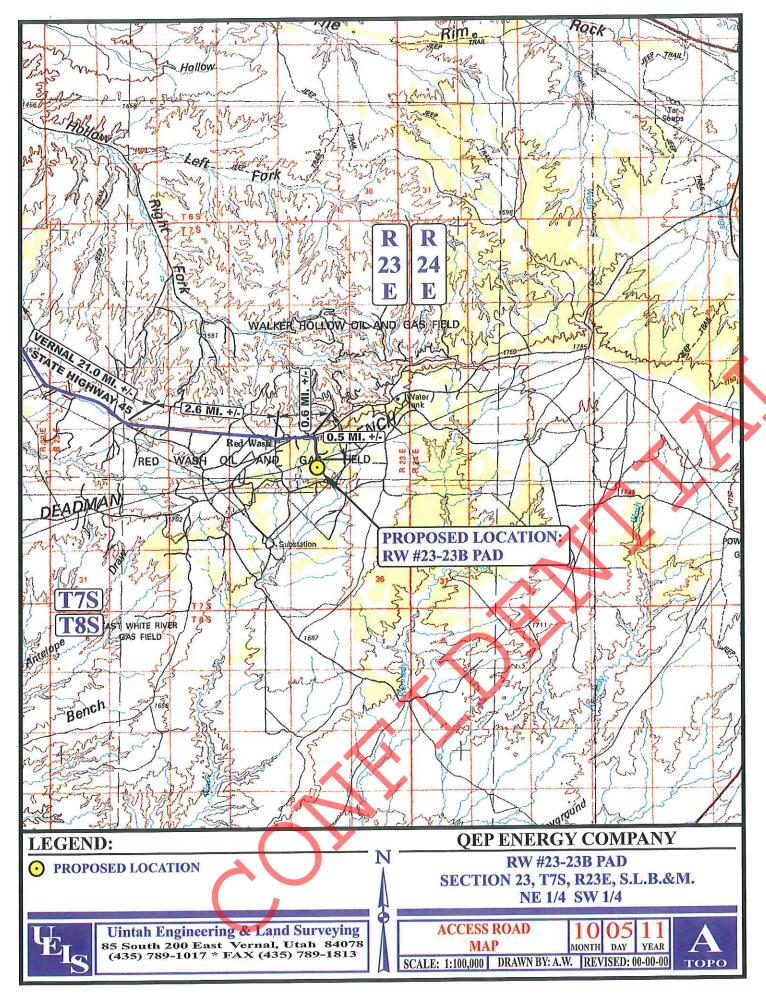


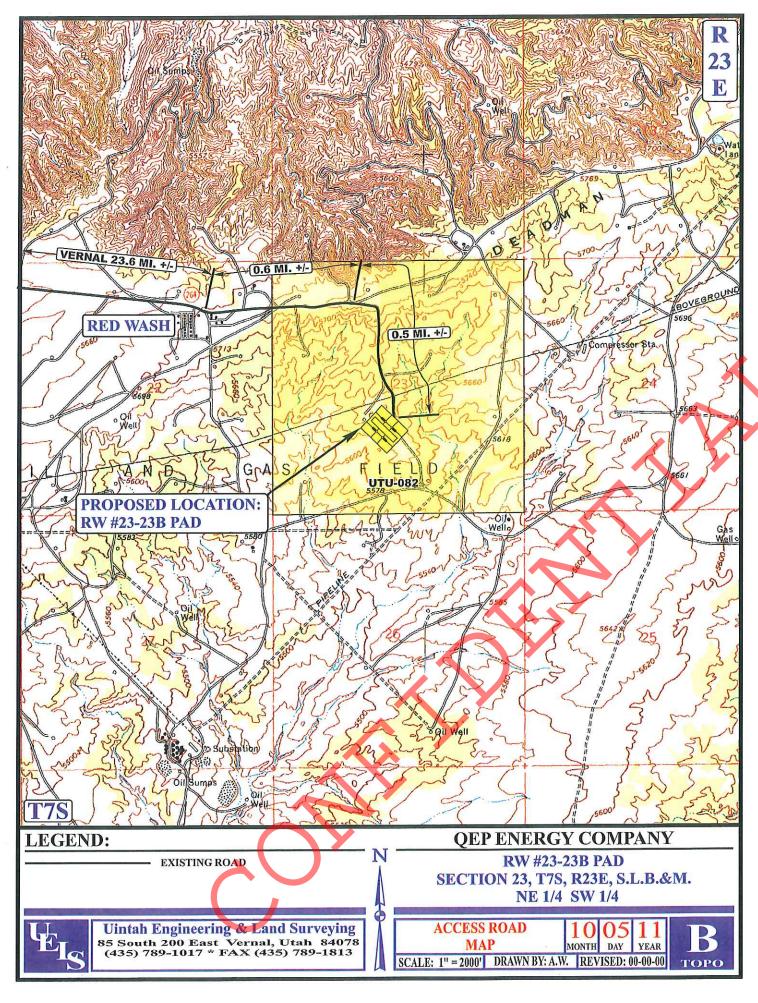
# QEP ENERGY COMPANY RW #23-23B PAD SECTION 23, T7S, R23E, S.L.B.&M.

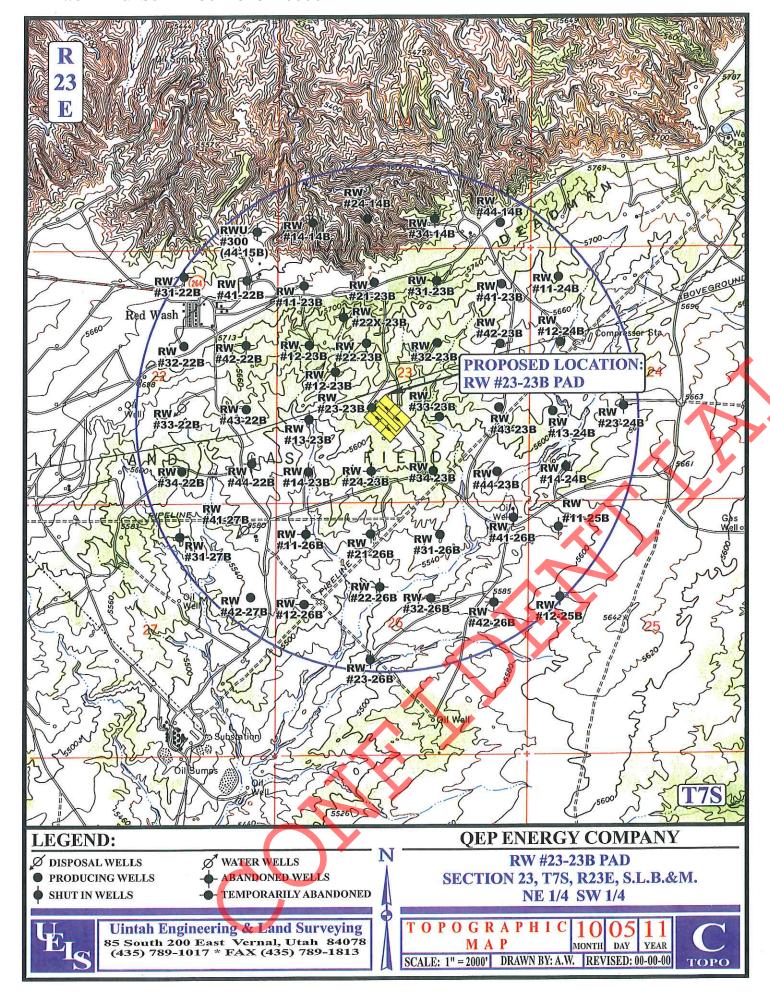
PROCEED IN AN EASTERLY, THEN SOUTHERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 3.9 MILES TO THE JUNCTION OF THIS ROAD AND STATE HIGHWAY 45 TO THE SOUTH; TURN RIGHT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.1 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 2.6 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 0.6 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN RIGHT AND PROCEED IN A SOUTHEASTERLY, THEN SOUTHERLY DIRECTION APPROXIMATELY 0.5 MILES TO THE PROPOSED LOCATION.

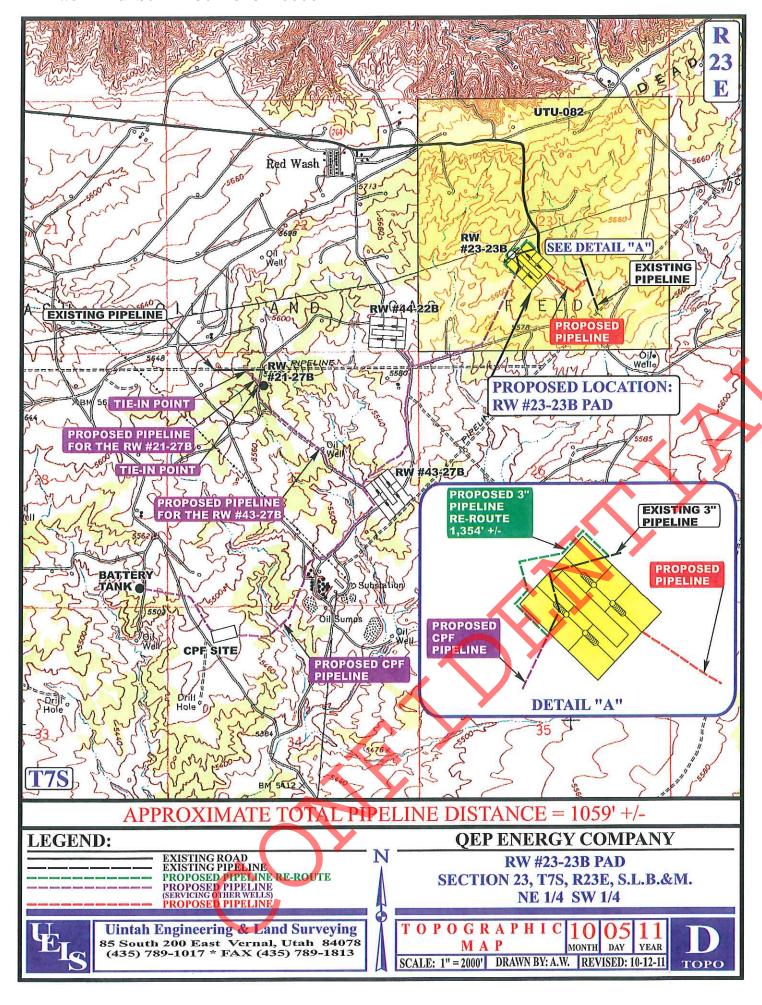
TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED LOCATION IS APPROXIMATELY 24.7 MILES.













# **QEP ENERGY (UT)**

Red Wash 23-23B PAD RW 5C4-23B

**Original Hole** 

Plan: Plan ver.1 - Permit

# Standard Planning Report

10 January, 2012



Plan ver.1 - Permit



Design:

#### **QEP Resources, Inc.**

Planning Report



EDMDB\_QEP Database: Company: QEP ENERGY (UT) Project: Red Wash Site: 23-23B PAD Well: RW 5C4-23B Wellbore: Original Hole

**Local Co-ordinate Reference: TVD Reference:** MD Reference: North Reference: **Survey Calculation Method:** 

Well RW 5C4-23B RKB @ 5641.30usft (Est RKB) RKB @ 5641.30usft (Est RKB) True

Minimum Curvature

Project Red Wash

US State Plane 1983 Map System:

North American Datum 1983 Geo Datum:

Utah Central Zone Map Zone:

Mean Sea Level

Using geodetic scale factor

23-23B PAD Site

Northing: 7,246,686.310 usft Site Position: Latitude: From: Мар Easting: 2,256,158.369 usft Longitude:

**Position Uncertainty:** 0.00 usft Slot Radius: 13-3/16 " Grid Convergences -109.295575 1.41 9

40.193199

Well RW 5C4-23B

**Well Position** +N/-S -221.64 usft Northing: 7,246,460.485 usft Latitude: 40.192591 +E/-W -173.27 usft Easting: 2,255,990.631 usft Longitude: -109.296195

System Datum:

5,625.30 usft **Position Uncertainty** 0.00 usft Wellhead Elevation: Ground Level: 5,625.30 usft

Wellbore Original Hole Magnetics **Model Name** Sample Date Declination **Dip Angle** Field Strength (nT) (°) 10.95 IGRF2010 12/7/2011 66.05 52,408

Design Plan ver.1 - Permit **Audit Notes:** Version: Phase: PLAN Tie On Depth: 0.00 **Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction (usft) (usft) (usft) (°) 0.00 300.55 0.00 0.00

Plan Sections			<b>^</b>							
Measured Depth (usft)	Inclination (°)	Azimuth	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,488.07	19.76	300.55	1,468.60	85.76	-145.29	2.00	2.00	0.00	300.55	
6,418.36	19.76	300.55	6,108.53	933.10	-1,580.82	0.00	0.00	0.00	0.00	
7,735.79	0.00	0.00	7,400.00	1,047.44	-1,774.54	1.50	-1.50	0.00	180.00	
11,476.79	0.00	0.00	11,141.00	1,047.44	-1,774.54	0.00	0.00	0.00	0.00	

Plan ver.1 - Permit



Design:

#### **QEP** Resources, Inc.

Planning Report



Database: EDMDB\_QEP
Company: QEP ENERGY (UT)
Project: Red Wash
Site: 23-23B PAD
Well: RW 5C4-23B
Wellbore: Original Hole

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Well RW 5C4-23B RKB @ 5641.30usft (Est RKB) RKB @ 5641.30usft (Est RKB) True

Minimum Curvature

Planned Survey									
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,488.07	19.76	300.55	1,468.60	85.76	-145.29	168.71	2.00	2.00	0.00
6,418.36	19.76	300.55	6,108.53	933.10	-1,580.82	1,835.67	0.00	0.00	0.00
7,735.79	0.00	0.00	7,400.00	1,047.44	-1,774.54	2,060.62	1.50	-1.50	0.00
11,476.79	0.00	0.00	11,141.00	1,047.44	-1,774.54	2,060.62	0.00	0.00	0.00

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
RW 5C4-23B Target - plan misses targe - Circle (radius 150		0.00 00usft at 77	8,310.00 35.79usft M	1,047.44 D (7400.00 T\	-1,774.54 /D, 1047.44 N	7,247,463.810 , -1774.54 E)	2,254,190.970	40.195466	-109.302547

Casing Points				
	Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Hole Diameter Diameter (") (")
	3,828.29	3,671.00 8 5/8"		8-5/8 12-1/4

Formations						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
	2,971.86	2,865.00	Green River		0.00	
	3,775.16	3,621.00	Mahogany		0.00	
	5,788.75	5,516.00	Est. Moderately Saline Water Base		0.00	
	6,428.41	6,118.00	Wasatch		0.00	
	8,653.79	8,318.00	Mesaverde		0.00	
	11,176.79	10,841.00	Sego		0.00	



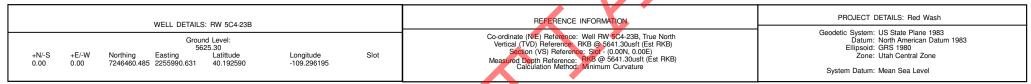
Company Name: QEP ENERGY (UT)

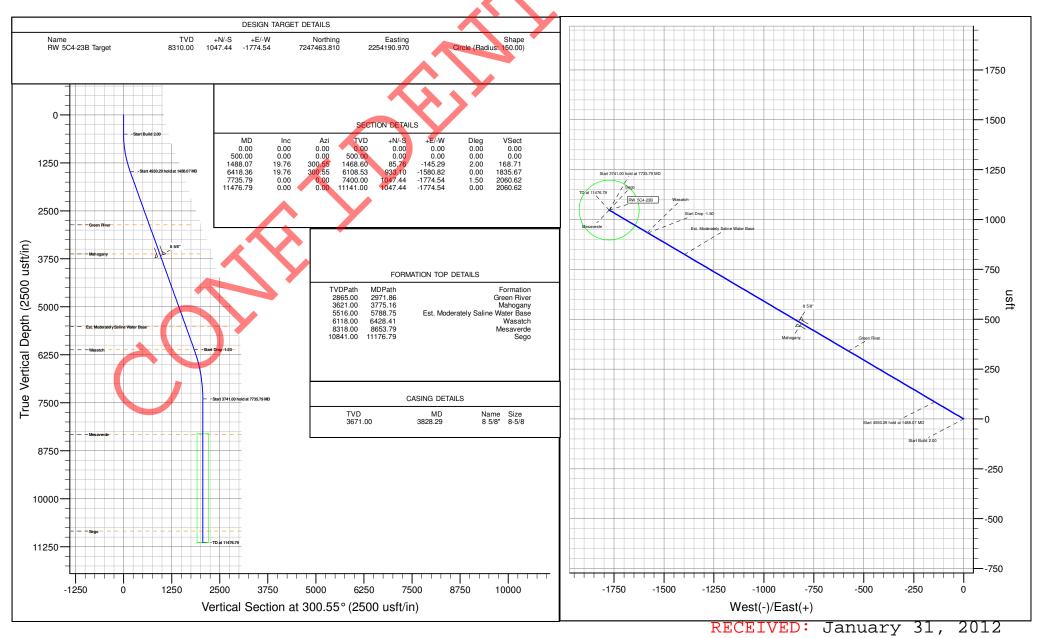
<sup>™</sup>

Magnetic North: 10.95 °

Magnetic Field
Strength: 52408.4snT
Dip Angle: 66.05 °
Date: 12/7/2011
Model: IGRF2010

Project: Red Wash Site: 23-23B PAD Well: RW 5C4-23B Wellbore: Original Hole Design: Plan ver.1 - Permit





# QEP ENERGY COMPANY RED WASH 23-23B PAD EXPANSION

# ONSHORE ORDER NO. 1 MULTI – POINT SURFACE USE & OPERATIONS PLAN

RW 7C1-23B Surface: BHL:		2330' FWL 2294' FEL	SEC.23 SEC.23	NESW, T7S, R23E SWNE, T7S, R23E
RW 2C1-23B Surface: BHL:	1971' FSL, 850' FNL, 2	2289' FWL 2290' FEL	SEC.23 SEC.23	NESW, T7S, R23E NWNE, T7S, R23E
RW 2C4-23B Surface: BHL:		2299' FWL 2290' FEL	SEC.23 SEC.23	NESW, T7S, R23E NWNE, T7S, R23E
RW 7B1-23B Surface: BHL:	•	2309' FWL 2291' FEL	SEC.23 SEC.23	NESW, T7S, R23E SWNE, T7S, R23E
RW 7B4-23B Surface: BHL:	,	2319' FWL 2292' FEL	SEC.23 SEC.23	NESW, T7S, R23E SWNE, T7S, R23E
RW 7C4-23B Surface: BHL:	,	2340' FWL 2293' FEL	SEC.23 SEC.23	NESW, T7S, R23E SENE, T7S, R23E
RW 10B1-23B Surface: BHL:		2350' FWL 2292' FEL	SEC.23 SEC.23	NESW, T7S, R23E NWSE, T7S, R23E
RW 10B4-23B Surface: BHL:		2360' FWL 2291' FEL	SEC.23 SEC.23	NESW, T7S, R23E NWSE, T7S, R23E
RW 10C1-23B Surface: BHL:	•	2494' FWL 2293' FEL	SEC.23 SEC.23	NESW, T7S, R23E NWSE, T7S, R23E
RW 10C4-23B Surface: BHL:		2504' FWL 2292' FEL	SEC.23 SEC.23	NESW, T7S, R23E NWSE, T7S, R23E
RW 15B1-23B Surface: BHL:		2514' FWL 2290' FEL	SEC.23 SEC.23	NESW, T7S, R23E SWSE, T7S, R23E

RECEIVED: January 31, 2012

DW 45D 4 00D			
RW 15B4-23B Surface: BHL:	1746' FSL, 2524' FWL 804' FSL, 2295' FEL	SEC.23 SEC.23	NESW, T7S, R23E SWSE, T7S, R23E
RW 15C1-23B Surface: BHL:	1736' FSL, 2534' FWL 476' FSL, 2295' FEL	SEC.23 SEC.23	NESW, T7S, R23E SWSE, T7S, R23E
RW 15C4-23B Surface: BHL:	1727' FSL, 2544' FWL 144' FSL, 2292' FEL	SEC. 23 SEC.23	NESW, T7S, R23E SWSE, T7S, R23E
RW 2B1-26B Surface: BHL:	1717' FSL, 2554' FWL 186' FNL, 2292' FEL	SEC.23 SEC.26	NESW, T7S, R23E NWNE, T7S, R23E
RW 2B4-26B Surface: BHL:	1707' FSL, 2564' FWL 516' FNL' 2292' FEL	SEC.23 SEC.26	NESW, T7S, R23E NWNE, T7S, R23E
RW 5B4-23B Surface: BHL:	1768' FSL, 2096' FWL 1829' FNL, 342' FWL	SEC.23 SEC.23	NESW, T7S, R23E SWNW, T7S, R23E
RW 5C1-23B Surface: BHL:	1759' FSL, 2106' FWL 2153' FNL, 343' FWL	SEC.23 SEC.23	NESW, T7S, R23E SWNW, T7S, R23E
RW 5C4-23B Surface: BHL:	1749' FSL, 2116' FWL 2483' FNL, 341' FWL	SEC.23 SEC.23	NESW, T7S, R23E SWNW, T7S, R23E
RW 12B1-23B Surface: BHL:	1739' FSL, 2126' FWL 2469' FSL, 342' FWL	SEC.23 SEC.23	NESW, T7S, R23E NWSW, T7S, R23E
RW 12B4-23B Surface: BHL:	1730' FSL, 2136' FWL 2132' FSL, 340' FWL	SEC.23 SEC.23	NESW, T7S, R23E NWSW, T7S, R23E
RW 12C4-23B Surface: BHL:	1720' FSL, 2146' FWL 1472' FSL, 342' FWL	SEC.23 SEC.23	NESW, T7S, R23E NWSW, T7S, R23E
RW 12C1-23B Surface: BHL:	1710' FSL, 2156' FWL 1800' FSL, 343' FWL	SEC.23 SEC.23	NESW, T7S, R23E NWSW, T7S, R23E
RW 13B1-23B Surface: BHL:	1701' FSL, 2166' FWL 1150' FSL, 342' FWL	SEC.23 SEC.23	NESW, T7S, R23E SWSW, T7S, R23E

RECEIVED: January 31, 2012

RW 11B4-23B Surface: BHL:	1573' FSL, 2300' FWL 2127' FSL, 1664' FWL	SEC.23 SEC.23	NESW, T7S, R23E NESW, T7S, R23E
RW 11C1-23B Surface: BHL:	1563' FSL, 2310' FWL 1796' FSL, 1663' FWL	SEC.23 SEC.23	NESW, T7S, R23E NESW, T7S, R23E
RW 11C4-23B Surface: BHL:	1553' FSL, 2320' FWL 1464' FSL, 1663' FWL	SEC.23 SEC.23	NESW, T7S, R23E NESW, T7S, R23E
RW 14B1-23B Surface: BHL:	1544' FSL, 2330' FWL 1142' FSL, 1662' FWL	SEC.23 SEC.23	NESW, T7S, R23E SESW, T7S, R23E
RW 14B4-23B Surface: BHL:	1534' FSL, 2341' FWL 806' FSL, 1660' FWL	SEC.23 SEC.23	NESW, T7S, R23E SESW, T7S, R23E
RW 14C1-23B Surface: BHL:	1524' FSL, 2351' FWL 480' FSL, 1661' FWL	SEC.23 SEC.23	NESW, T7S, R23E SESW, T7S, R23E
RW 14C4-23B Surface: BHL:	1515' FSL, 2361' FWL 149' FSL, 1662' FWL	SEC.23 SEC.23	NESW, T7S, R23E SESW, T7S, R23E
RW 3B1-26B Surface: BHL:	1505' FSL, 2371' FWL 182' FNL, 1661' FWL	SEC.23 SEC.26	NESW, T7S, R23E NENW, T7S, R23E

This surface use and operations plan provides site specific information for the above referenced wells.

An onsite inspection was conducted for the RW 23-23B Pad Expansion on October 11, 2011. Weather conditions were sunny at the time of the onsite. In attendance at the inspection were the following individuals:

Kevin Sadlier

Holly Villa

Bureau of Land Management
Bureau of Land Management
QEP Energy Company

Stephanie Tomkinson
Ryan Angus
Valyn Davis
Bob Haygood
QEP Energy Company

Andy Floyd Uintah Engineering & Land Surveying

The proposed project consists of a 32 well pad with 14.198 acres of total disturbance. This equates to approximately 0.43 acres of disturbance per well.

#### 1. Existing Roads:

The proposed well site is approximately 25 miles South of Vernal, Utah.

Refer to Topo Maps A and B for location of access roads within a 2 – mile radius.

All existing roads will be maintained and kept in good repair during all phases of operation.

# 2. Planned Access Roads:

Please refer to QEP Energy Company Greater Deadman Bench EIS UTU-080-200-0369V Record of Decision dated March 31, 2008.

Refer to Topo Map B for the location of the proposed access road.

No new access road is proposed. The access to be used is the existing road that parallels pod #2. The road will be re-routed on the north east side of the pad and will remain on the pad. Graveling or capping the roadbed will be performed as necessary to provide a well constructed safe road. Should conditions warrant, rock, gravel or culverts will be installed as needed.

Refer to Topo Map B for the location of the proposed access road.

## 3. Location of Existing Wells Within a 1 - Mile Radius:

Please refer to Topo Map C.

# 4. Location of Existing & Proposed Facilities:

Please refer to QEP Energy Company Greater Deadman Bench EIS UTU-080-200-0369V Record of Decision dated March 31, 2008.

#### Please refer to Figure 1 for production facility layout and location.

The following guidelines will apply if the well is productive.

A containment dike will be constructed completely around those production facilities which contain fluids (i.e., production tanks, produced water tanks). These dikes will be constructed of compacted impervious subsoil; hold 110% of the capacity of the largest tank; and, be independent of the back cut. If a Spill Prevention, Control, and Countermeasure (SPCC) Plan is required by the Environmental Protection Agency, the containment dike may be expanded to meet SPCC requirements with approval by the BLM/VFO AO. The specific APD will address additional capacity if such is needed due to environmental concerns. The use of topsoil for the construction of dikes will not be allowed.

All loading lines will be placed inside the berm surrounding the tank batteries.

All permanent (on site six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a color approved by the BLM.

It was determined on the onsite by the BLM VFO AO that the facilities will be painted Covert Green.

The existing 3" pipeline that crosses the proposed location will be re-routed to the north east side of the pad for safety. The proposed pipeline re-route is 1,354' in length, containing approximately .932 acres. Please refer to Topo Map D for the location of the existing pipeline and the re-route.

Refer to Topo Map D for the location of the proposed pipeline.

All existing equipment will be moved off location before any construction begins.

The proposed surface pipeline will be constructed utilizing existing disturbed areas to minimize surface disturbance. No construction activities will be allowed outside of the proposed pipeline.

Prior to construction, the Permittee will develop a plan of installation to minimize surface disturbance. Pipe will be strung along the pipeline route with either a flatbed trailer and rubber tired backhoe or a tracked typed side boom. Where surface conditions do not allow the pipe to be strung using conventional methods, the Permittee will utilize pull sections to run the fabricated pipe through the area from central staging areas along the pipeline route.

Upon completion of stringing activities the Permittee will fabricate the pipeline on wooden skids adjacent to the centerline of the pipeline route using truck mounted welding machines. All fabricated piping will be lowered off of the wooden skids and placed along the centerline. Upon completion of all activities, the wooden skids will be removed from the pipeline route using a flatbed truck or flatbed truck and trailer.

When the surface terrain prohibits the Permittee from safely installing the pipeline along the pipeline route, grading of the route will be required. Prior to installing the pipeline in these areas a plan will be developed to safely install the pipeline while minimizing grading activities and surface disturbances. Additionally, erosion control Best Management Practices will be installed as needed prior to the start of any grading activities. Surface grading will be limited to what is needed to safely install the pipeline. Track type bulldozers and track type backhoes will be utilized for grading activities.

Upon completion of the pipeline installation, the pipeline route will be restored to the pre-disturbance surface contours.

The proposed pipeline will be a surface 10" or smaller, 1,059' in length, containing .729 acres.

#### **Road Crossings**

Fusion Bond or concrete coated pipe will be used for all road crossings to alleviate future corrosion.

All pipe and fittings used for road crossings will be prefabricated within the proposed pipeline route to minimize the duration of open pipe trench across the roadway. Pipe used for road crossings will be isolated on each end with a flange set and insulation kit and cathodically protected with a magnesium type anode. Adequately sized equipment will be used for minor and major road crossings. Depth of cover for minor roads will be >4' and the depth of cover for major roads will be >6'.

Prior to lowering the pipe in the trench, the Permittee will "Jeep" the pipe to locate and repair any Holidays in the pipe coating. Upon lowering the pipe in the trench, 6" of bedding and a minimum of 6" of shading will be installed to protect the pipe using either native soils <1" in diameter or imported sand. Pipe trenches that extend across gravel roads will be backfilled with native soils to within 8" of the driving surface and capped with 3/4" road base. Pipe trenches that extend across asphalt paved roads will be backfilled to 4" of the driving surface with 3/4" road base and capped asphalt material.

#### 5. Location and Type of Water Supply:

Please refer to QEP Energy Company Greater Deadman Bench EIS UTU-080-200-0369V Record of Decision dated March 31, 2008.

Water for drilling purposes would be obtained from Wonsits Valley Water Right # A 36125 (which was filed on May 7, 1964) or Red Wash Water Right # 49-2153 (which was filed on March 25, 1960). It was determined by the Fish and Wildlife Service that any water right number filed before 1989 is not depleting to the Upper Colorado River System.

# 6. Source of Construction Materials:

Please refer to QEP Energy Company Greater Deadman Bench EIS UTU-080-200-0369V Record of Decision dated March 31, 2008.

Surface and subsoil materials in the immediate area will be utilized.

Any gravel will be obtained from a commercial source.

The use of materials under BLM jurisdiction will conform with 43 CFR 3610.2-3.

#### 7. Methods of Handling Waste Materials:

Please refer to QEP Energy Company Greater Deadman Bench EIS UTU-080-200-0369V Record of Decision dated March 31, 2008.

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids including salts and chemicals will be contained in the reserve pit. Upon termination of drilling and completion operations, the liquid contents of the reserve pit will be used at the next drill site or will be removed and disposed of at an approved waste disposal facility within 6 months after drilling is terminated.

Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1.

Unless specified in the site specific APD, the reserve pit will be constructed on the location and will not be located within natural drainages, where a flood hazard exists or surface runoff will or damage the pit walls. The reserve pit will be constructed so that it will not leak, break, or allow discharge of liquids.

It will be determined at the on-site inspection if a pit liner is necessary, the reserve pit will be lined with a synthetic reinforced 30 mil liner with sufficient bedding to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place.

No trash or scrap will be disposed of in the pit.

Reserve pit leaks are considered an undesirable event and will be orally reported to the AO.

After first production, produced wastewater will be confined to the approved pit or storage tank for a period not to exceed 90 days.

After the 90 day period, the produced water will be contained in tanks on location and then hauled by truck to one of the following pre-approved disposal sites:

Red Wash Disposal well located in the SESE, Section 28, T7S, R23E, West End Disposal located in the NESE, Section 28, T7S, R22E, NBE 12 SWD-10-9-23 located in the NWSW, Section 10, 9S, 23E.

Produced water, oil, and other byproducts will not be applied to roads or well pads for the control of dust or weeds. The dumping of produced fluids on roads, well sites, or other areas will not be allowed.

Any spills of oil, gas, salt water, or other noxious fluids will be immediately cleaned up and removed to an approved disposal site. The spills will be reported to the AO and other authorities as appropriate.

A chemical porta-toilet will be furnished with the drilling rig. The chemical porta-toilet wastes will be hauled to Ashley Valley Sewer and Water System for disposal.

Garbage, trash, and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. Trash will not be burned on location. All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig. All trash and waste material will be hauled to the Uintah County Landfill.

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of wells. Furthermore, extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will not be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completing of wells within these areas. Specific APD's shall address any modifications from this policy.

#### 8. Ancillary Facilities:

None anticipated.

#### 9. Well Site Layout: (See Location Layout Diagram)

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram rig orientation, parking areas, and access roads, as well as the location of the following:

The reserve pit.

The stockpiled topsoil will not be used for facility berms. All brush removed from the well pad during construction will be stockpiled with topsoil.

The flare pit or flare box will be located downwind from the prevailing wind direction.

Any drainage that crosses the well location will be diverted around the location by using ditches, water diversion drains or berms. If deemed necessary at the on-site, erosion drains may be installed to contain sediments that could be produced from access roads and well locations.

A pit liner is required. A felt pit liner will be required if bedrock is encountered.

# 10. Fencing Requirements:

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

All pits will be fenced according to the following minimum standards:

39 inch net wire will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.

The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.

Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

All wire shall be stretched using a stretching device before it is attached to corner posts.

The reserve pit will be fenced on three (3) sides during drilling operations. The fourth side will be put in place when the rig moves off location. The pit will be fenced and maintained until it is backfilled. If drilling operations does not commence within 3 days, the fourth side of the fence will be installed

#### 11. Plans for Reclamation of the Surface:

Please refer to QEP Energy Company Uinta Basin Division Reclamation Plan

### **Site Specific Procedures:**

#### **Site Specific Reclamation Summary:**

Reclamation will follow QEP Energy Company, Uinta Basin Division's Reclamation Plan, September 2009 (QEP's Reclamation Plan) and the BLM Green River District Reclamation Guidelines.

After the pad is built, the topsoil piles will be seeded, signed, and erosion control devices and techniques will be implemented.

All trash and debris will be removed from the disturbed area.

After the wells are on production, the pad will be downsized to a smaller production pad.

The cuttings pit is located in the center of the production pad; it will be backfilled and capped with road base and gravel.

Interim reclamation will be conducted on the portion of the pad that is downsized.

The interim reclamation area will be recontoured to blend with the surrounding landscape. All topsoil will be evenly distributed.

Water courses and drainages will be established.

Erosion control devices and techniques will be installed where needed.

Seeding will be done in the fall, prior to ground freeze up.

The seed mix will be determined prior to seeding.

Monitoring and reporting will be conducted as stated in QEP's Reclamation Plan. A reference site and weed data sheet have been established and are included in this application.

Weed control will be conducted as stated in QEP's Reclamation Plan.

It was determined and agreed upon that there is 5" inches of top soil.

# 12. Surface Ownership:

Bureau of Land Management 170 South 500 East Vernal, Utah 84078 (435) 781-4400

## 13. Other Information:

A Class III archaeological survey was conducted by Montgomery Archaeology Consultants. A copy of this report was submitted on October 19, 2011, **State of Utah Antiquities Project U-11-MQ-0913b** by Montgomery Archaeology Consultants. Cultural resource clearance was recommended for this location.

A Class III paleontological survey was conducted by Intermountain Paleo Consulting. A copy of this report was submitted on October 14, 2011 IPC # 11-176 by Stephen D. Sandau. The inspection resulted in the location of no fossil resources. However, if vertebrate fossil(s) are found during construction a paleontologist should be immediately notified. QEP Energy Company will provide Paleo monitor if needed.





11002 East 17500 South Vernal, UT 84078 Telephone 435-781-4331 Fax 435-781-4395

January 26, 2012

Ms. Diana Mason Division of Oil, Gas and Mining P.O. Box 145801 Salt Lake City, UT 84114-6100

RE: Directional Drilling R649-3-11
Red Wash Unit
RW 5C4-23B
T7S-R23E
Section 23:
1749' FSL, 2116' FWL, NESW, (Surface)
2483' FNL, 341' FWL, SWNW, (Bottom Hole)
Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of QEP Energy Company Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649 -3-11 pertaining to the location and drilling of a directional well.

QEP Energy Company is permitting this well at this location for geological reasons. Locating the well at the surface location and directionally drilling from this location, QEP Energy Company will be able to minimize surface disturbance.

Furthermore, QEP Energy Company certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information QEP Energy Company requests the permit be granted pursuant to Rule R649-3-11.

Sincerely,

QEP Energy Company

Jan Nelson Permit Agent

#### Lessee's or Operator's Representative & Certification:

Valyn Davis Regulatory Affairs Analyst QEP Energy Company 11002 East 17500 South Vernal, UT 84078 (435) 781-4369

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

QEP Energy Company is considered to be the operator of the subject well. QEP Energy Company agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

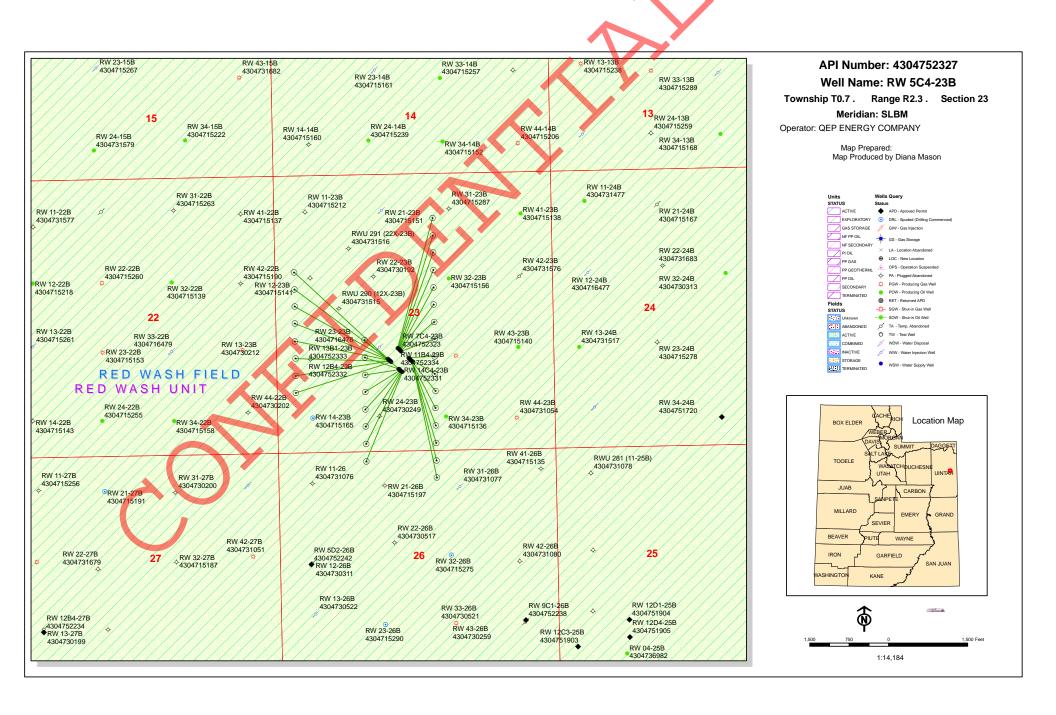
Bond coverage pursuant to 43 CFR 3104.2 for lease activities is being provided by Bond No. ESB000024

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist, that I have full knowledge of the State and Federal laws applicable to this operations; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Valyn Waws

1/27/2012

Date



API Well Number: 43047523270000

# **United States Department of the Interior**

#### BUREAU OF LAND MANAGEMENT

Utah State Office P.O. Box 45155 Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

February 7, 2012

#### Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2012 Plan of Development Red Wash Unit,

Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2012 within the Red Wash Unit, Uintah County, Utah.

API#	WE	LL NAME			LOCATIO	ON		
(Proposed PZ	MES	SA VERDE)			X			
43-047-52303	RW	2C1-23B BHL			R23E R23E			
43-047-52304	RW	2C4-23B BHL	 4		R23E R23E			 
43-047-52305	RW	7B1-23B BHL			R23E R23E		_	
43-047-52306	RW	7B4-23B BHL			R23E R23E		_	
43-047-52307	RW				R23E R23E			
43-047-52308	RW				R23E R23E			
43-047-52309	RW				R23E R23E		_	
43-047-52310	RW				R23E R23E		-	FWL FWL
43-047-52311	RW			T07S T07S	R23E R23E	1768 1829	_	

RECEIVED: February 14, 2012

API#	WELL NAME	LOCATION	
(Proposed PZ	MESA VERDE)		
43-047-52312		S R23E 1759 FSL S R23E 2153 FNL	
43-047-52313		S R23E 1707 FSL S R23E 0516 FNL	
43-047-52314		S R23E 1727 FSL S R23E 0144 FSL	
43-047-52315		S R23E 1756 FSL S R23E 1133 FSL	
43-047-52316		S R23E 1736 FSL S R23E 0476 FSL	
43-047-52317		S R23E 1765 FSL S R23E 1461 FSL	
43-047-52318		S R23E 1544 FSL S R23E 1142 FSL	
43-047-52319		S R23E 1746 FSL S R23E 0804 FSL	
43-047-52320		S R23E 1775 FSL S R23E 1793 FSL	
43-047-52321		S R23E 1553 FSL S R23E 1464 FSL	
43-047-52322		S R23E 1903 FSL S R23E 2123 FSL	
43-047-52323		S R23E 1922 FSL S R23E 2495 FNL	
43-047-52324		S R23E 1717 FSL S R23E 0186 FNL	
43-047-52325		S R23E 1505 FSL S R23E 0182 FNL	
43-047-52326		S R23E 1563 FSL S R23E 1796 FSL	
43-047-52327		S R23E 1749 FSL S R23E 2483 FNL	
43-047-52328		S R23E 1739 FSL S R23E 2469 FSL	
43-047-52329		S R23E 1720 FSL S R23E 1472 FSL	

Page 2

API Well Number: 43047523270000

Page 3 API# WELL NAME LOCATION (Proposed PZ MESA VERDE) 43-047-52330 RW 12C1-23B Sec 23 T07S R23E 1710 FSL 2156 FWL BHL Sec 23 T07S R23E 1800 FSL 0343 FWL 43-047-52331 RW 14C4-23B Sec 23 T07S R23E 1515 FSL 2361 FWL BHL Sec 23 T07S R23E 0149 FSL 1662 FWL 43-047-52332 RW 12B4-23B Sec 23 T07S R23E 1730 FSL 2136 FWL BHL Sec 23 T07S R23E 2132 FSL 0340 FWL 43-047-52333 RW 13B1-23B Sec 23 T07S R23E 1701 FSL 2166 FWL BHL Sec 23 T07S R23E 1150 FSL 0342 FWL 43-047-52334 RW 11B4-23B Sec 23 T07S R23E 1573 FSL 2300 FWL BHL Sec 23 T07S R23E 2127 FSL 1664 FWL

This office has no objection to permitting the wells at this time.

# Michael L. Coulthard Digitally Signed by Michael L. Coulting Digitally Signe

bcc: File - Red Wash Unit

Division of Oil Gas and Mining

Central Files Agr. Sec. Chron Fluid Chron

MCoulthard:mc:2-7-12

# **WORKSHEET** APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED: 1/31/2012** API NO. ASSIGNED: 43047523270000

WELL NAME: RW 5C4-23B

**OPERATOR: QEP ENERGY COMPANY (N3700)** PHONE NUMBER: 435 781-4331

**Engineering Review:** 

**CONTACT:** Jan Nelson

SURFACE: 1749 FSL 2116 FWL

PROPOSED LOCATION: NESW 23 070S 230E **Permit Tech Review:** 

BOTTOM: 2483 FNL 0341 FWL Geology Review:

**COUNTY: UINTAH** 

**LATITUDE: 40.19258** LONGITUDE: -109.29611 NORTHINGS: 4450524.00 **UTM SURF EASTINGS: 645038.00** 

FIELD NAME: RED WASH

LEASE TYPE: 1 - Federal **LEASE NUMBER: UTU082** PROPOSED PRODUCING FORMATION(S): MESA VERDE

SURFACE OWNER: 1 - Federal COALBED METHANE: NO

#### LOCATION AND SITING: **RECEIVED AND/OR REVIEWED:** R649-2-3. ✓ PLAT Unit: RED WASH Bond: FEDERAL - ESB000024 R649-3-2. General **Potash** Oil Shale 190-5 Oil Shale 190-3 R649-3-3. Exception Oil Shale 190-13 **Drilling Unit** Water Permit: A36125 / 49-2153 Board Cause No: Cause 187-07 Effective Date: 9/18/2001 **RDCC Review:** Siting: Suspends General Siting Fee Surface Agreement Intent to Commingle ▼ R649-3-11. Directional Drill

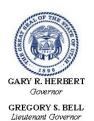
Comments: Presite Completed

Commingling Approved

4 - Federal Approval - dmason Stipulations:

15 - Directional - dmason

API Well No: 43047523270000



# State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

# Permit To Drill

\*\*\*\*\*\*

Well Name: RW 5C4-23B

**API Well Number:** 43047523270000

Lease Number: UTU082 Surface Owner: FEDERAL Approval Date: 2/14/2012

#### Issued to:

QEP ENERGY COMPANY, 11002 East 17500 South, Vernal, Ut 84078

#### Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 187-07. The expected producing formation or pool is the MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

#### **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

#### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### **Conditions of Approval:**

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

#### **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well contact Carol Daniels at 801-538-5284

(please leave a voicemail message if not available)

OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas

API Well No: 43047523270000

website

at http://oilgas.ogm.utah.gov

## Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) due prior to implementation
- Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
  - Report of Water Encountered (Form 7) due within 30 days after completion
  - Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas VED

UNITED STATES	1	Expires .
RTMENT OF THE INTERIOR		5. Lease Serial No.
	· · · · · · · · · · · · · · · · · · ·	LITHOGO

BUREAU OF LAND MANAGEMENT TO DRILL APPLICATION FOR PERMIT TO DRIVEN FOR PERMIT TO D

**DEPA** 

				,			
la. Type of work: DRILL REENTER				7 If Unit or CA Agreement, Name and No. 892000761X			
lb. Type of Well: Oil Well Gas Well Other		ingle Zone Multi	ple Zone	8. Lease Name and RW 5C4-23B	d Well No.		
Name of Operator QEP ENERGY COMPANY	-			9. API Well No. 43.04.	7.523	シフ	
<sup>3a.</sup> Address 11002 SOUTH 17500 EAST VERNAL, UT 84078	3b. Phone N (435) 781	0. (include area code) -4369		10. Field and Pool, or Exploratory RED WASH			
4. Location of Well (Report location clearly and in accordance with ar	ty State require	nents.*)		11. Sec., T. R. M. or	Blk. and Survey o	r Area	
At surface NESW, 1749' FSL, 2116' FWL, 40.192592 N	LAT., 109.2	96194 W LON.		SEC. 23, T7S, R2	3E, MER SLB		
At proposed prod. zone SWNW, 2483' FNL, 341' FWL, 40.	195467 N L	AT., 109.302547 W	LON.				
<ol> <li>Distance in miles and direction from nearest town or post office*</li> <li>MILES +/- SOUTH EAST OF VERNAL, UTAH</li> </ol>				12. County or Parish UINTAH	13. S	State	
15. Distance from proposed* 341' location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of 1280	acres in lease	17. Spacin 10	ing Unit dedicated to this well			
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 7780' FROM UNIT BOUNDARY LINE	19. Propose 11,476' M 11,141' TV	D	/BIA Bond No. on file 0024				
21. Elevations (Show whether DF, KDB, RT, GL, etc.)		mate date work will star	t*	23. Estimated durati	 on		
5625 GL	06/01/201	2	30 DAYS				
	24. Atta	chments			<del></del>		
The following, completed in accordance with the requirements of Onshor	e Oil and Gas	Order No.1, must be at	tached to this	s form:			
Well plat certified by a registered surveyor.     A Drilling Plan.		4. Bond to cover the Item 20 above).	e operation	s unless covered by an	n existing bond of	ı file (see	
3. A Surface Use Plan (if the location is on National Forest System I SUPO must be filed with the appropriate Forest Service Office).	Lands, the	Operator certification     Such other site s     BLM.		rmation and/or plans a	s may be required	l by the	
25. Signature Valyn Wavo		(Printed/Typed) N DAVIS			Date 01/26/2012		
Citle REGULATORY AFFAIRS ANALYST				<del></del> .			
Approved by (Signature)	Name	(Printed/Typed) Ke	enczk	a	Date JUN 2	8 2012	
Assistent Field Manager Lands & Mineral Resources	Office	VERNAL	FIELD	OFFICE .			
Application approval does not warrant or certify that the applicant holds onduct operations thereon. Conditions of approval, if any, are attached.	legal or equit	able title to those rights	in the subje	ect lease which would e	ntitle the applica	ıtto	
itle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a critates any false, fictitious or fraudulent statements or representations as to	me for any pe any matter w	rson knowingly and wi ithin its jurisdiction.	llfully to ma	ke to any department o	r agency of the	 Jnited	
(Continued on page 2)		<del></del>					

\*(Instructions on page 2)

RECEIVED JUL 0 5 2012

DIV. OF OIL, GAS & MINING **NOTICE OF APPROVAL** CONDITIONS OF APPROVAL ATTACHED

CONFIDENTIAL

75X50748AZ

17/R- 1/11/12



# UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE** 170 South 500 East

**VERNAL, UT 84078** (435) 781-4400



# CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:	QEP ENERGY COMPANY	Location:	NESW, Sec.23, T7S R23E
Well No:	RW 5C4-23B	Lease No:	UTU-082
API No:	43-047-52327	Agreement:	Red Wash

**OFFICE NUMBER:** 

(435) 781-4400

OFFICE FAX NUMBER:

(435) 781-3420

# A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

#### NOTIFICATION REQUIREMENTS

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	÷-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to:  blm_ut_vn_opreport@blm.gov
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

Page 2 of 7 Well: RW 5C4-23B 6/22/2012

# SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

- All new and replacement internal combustion gas field engines of less than or equal to 300 designrated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop
  work and contact the Authorized Officer (AO). A determination will be made by the AO as to what
  mitigation may be necessary for the discovered paleontologic material before construction can
  continue.

#### Site Specific COA's

- When feasible, two or more rigs (including drilling and completion rigs) will not be run simultaneously within 200 meters of each other. If two or more rigs must be run simultaneously within 200 meters of each other, then effective public health buffer zones out to 200 meters (m) from the nearest emission source will be implemented. Examples of an effective public health protection buffer zone include the demarcation of a public access exclusion zone by signage at intervals of every 250 feet that is visible from a distance of 125 feet during daylight hours, and a physical buffer such as active surveillance to ensure the property is not accessible by the public during drilling operations. Alternatively, the proponent may demonstrate compliance with the 1-hour NO2 National Ambient Air Quality Standards (NAAQS) with appropriate and accepted near-field modeling. As part of this demonstration, the proponent may propose alternative mitigation that could include but is not limited to natural gas—fired drill rigs, installation of NOX controls, time/use restrictions, and/or drill rig spacing.
- All new and replacement internal combustion gas field engines of less than or equal to 300 designrated horse power must not emit more than 2 grams of NOx per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower-hour.
- All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 grams of NOx per horsepower-hour.
- · Green completions would be used for all well completion activities where technically feasible.
- Employ enhanced VOC emission controls with 95% control efficiency on production equipment having a potential to emit greater than 5 tons per year.
- The reserve pit will be fenced on three sides prior to drilling activity and closed off on the fourth side after drilling is finished. The reserve pits for the wells will be lined with a 16 ml liner with felt.
- A dike will be constructed around those production facilities that contain fluids. The dikes will be
  constructed of compacted subsoil. They will be impervious, hold 10 percent more than the capacity
  of the largest tank, and be independent of the back cut.

Page 3 of 7 Well: RW 5C4-23B

6/22/2012

# DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

#### SITE SPECIFIC DOWNHOLE COAs:

Site Specific Drilling Plan COA's:

- Gamma ray Log shall be run from Total Depth to Surface.
- CBL will be run from TD to TOC.

#### Variances Granted:

Air Drilling

- Properly lubricated and maintained rotating head. Variance granted to use a properly maintained and lubricated diverter bowl in place of a rotating head.
- Blooie line discharge 100' from the well bore. Variance granted for blooie line discharge to be 50' to 70' from the well bore.
- Compressors located in the opposite direction from the blooie line a minimum of 100' from the well bore. Variance granted for truck/trailer mounted air compressors located 50' from the well bore.
- In lieu of mud products on location, operator will fill a 400 bbl tank with water for the kill medium.
- Automatic igniter. Variance granted for igniter, a diffuser will be used instead. Operator will mount a
  deflector at the end of the blooie line to change direction and reduce the velocity of the cuttings flow
  to the reserve pit.
- Flare pit. Variance granted, there is no need of a flare during the drilling of the surface hole.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

#### DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.

Page 4 of 7 Well: RW 5C4-23B 6/22/2012

- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and NOT by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is
  encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal
  Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM,
   Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall
  be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL
  to this office.
- Please submit an electronic copy of all other logs run on this well in LAS format to UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

Page 5 of 7 Well: RW 5C4-23B 6/22/2012

#### **OPERATING REQUIREMENT REMINDERS:**

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at <a href="https://www.ONRR.gov">www.ONRR.gov</a>.
- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
  notified when it is placed in a producing status. Such notification will be by written communication
  and must be received in this office by not later than the fifth business day following the date on
  which the well is placed on production. The notification shall provide, as a minimum, the following
  informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - o Unit agreement and/or participating area name and number, if applicable.
  - o Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of

Page 6 of 7 Well: RW 5C4-23B

6/22/2012

the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering
  lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a
  suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be
  obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
  equipment shall be removed from a well to be placed in a suspended status without prior approval
  of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior
  approval of the BLM Vernal Field Office shall be obtained and notification given before resumption
  of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of

Page 7 of 7 Well: RW 5C4-23B 6/22/2012

Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

Sundry Number: 29591 API Well Number: 43047523270000

	STATE OF UTAH		FORM 9		
ι	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	G	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU082		
SUNDR	Y NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
	posals to drill new wells, significantly dee reenter plugged wells, or to drill horizontal n for such proposals.		7.UNIT or CA AGREEMENT NAME: RED WASH		
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: RW 5C4-23B		
2. NAME OF OPERATOR: QEP ENERGY COMPANY			9. API NUMBER: 43047523270000		
3. ADDRESS OF OPERATOR: 11002 East 17500 South,		ONE NUMBER: 3-3068 Ext	9. FIELD and POOL or WILDCAT: RED WASH		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1749 FSL 2116 FWL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NESW Section: 2	IIP, RANGE, MERIDIAN: 23 Township: 07.0S Range: 23.0E Meridian:	S	STATE: UTAH		
11. CHEC	K APPROPRIATE BOXES TO INDICATE N	IATURE OF NOTICE, REPOR	T, OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
	_ ACIDIZE	ALTER CASING	CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME		
SUBSEQUENT REPORT	☐ CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
Date of Work Completion:	L DEEPEN L	FRACTURE TREAT	☐ NEW CONSTRUCTION		
	OPERATOR CHANGE	PLUG AND ABANDON	LI PLUG BACK		
SPUD REPORT Date of Spud:	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
9/4/2012	TUBING REPAIR	SIDETRACK TO REPAIR WELL VENT OR FLARE	☐ TEMPORARY ABANDON ☐ WATER DISPOSAL		
DRILLING REPORT	□ WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION		
Report Date:					
	WILDCAT WELL DETERMINATION	OTHER	OTHER:		
l .	COMPLETED OPERATIONS. Clearly show all point of the conductor pipe READY MIX.		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY September 05, 2012		
NAME (PLEASE PRINT)	PHONE NUMBER	TITLE			
Valyn Davis	435 781-4369	Regulatory Affairs Analyst			
SIGNATURE N/A		<b>DATE</b> 9/4/2012			

Operator Rig Name/# Rig. IL Submitted By Phone Number \( \frac{\gamma_2}{35} - \gamma_3 \) Well Name/Number \( \frac{\gamma_2}{35} - \gamma_3 \) Section \( \frac{23}{3} \) Township \( \frac{5}{3} \) Range \( \frac{23}{35} \) Lease Serial Number \( \frac{\lambda_1 \lambda_2}{2323000} \) Spud Notice — Spud is the initial spudding of the well, out below a casing string.  \[ \text{Date/Time } \frac{5\alpha_1}{3} \) \( \frac{2}{3} \) \( \frac{2} \) \( \frac{2}{3} \) \(	not drilling
~ Oa.e.	
Date/Time AM Define PM Define	
BOPE Initial BOPE test at surface casing point BOPE test at intermediate casing point 30 day BOPE test Other	RECEIVED SEP 0 4 2012 DIV. OF OIL, GAS & MINING
Date/Time AM [ PM [	
Remarks Spud Conductor 40 To 60'	

#### STATE OF UTAH **DEPARTMENT OF NATURAL RESOURCES** DIVISION OF OIL, GAS AND MINING

#### **ENTITY ACTION FORM**

Operator:

**QEP ENERGY COMPANY** 

Operator Account Number: N 3700

Address:

11002 EAST 17500 SOUTH

city VERNAL

state UT zip 84078 Phone Number: (435) 781-4369

Well 1

API Number	Well	Name	QQ	Sec	Twp	Rng		County	
4304752327	RW 5C4-23B		NESW	23	7S	23E		UINTAH	
Action Code	Current Entity Number	New Entity Number	s	pud Da	te	74.31.01033313314	Service Transfer	Assignmen tive Date	t.
В	99999	18478		9/4/201	2	91	21	12013	<u></u>
Comments: WMN	IFD				PAN	Civ			-

Well 2

API Number	Well	Name	QQ	Sec	Twp	Rng		County
4304752328	RW 12B1-23B		NESW	23	78	23E		UINTAH
Action Code	Current Entity Number	New Entity Number	s	pud Da	le	State of the State	<b>第1112/65 万中国国际国际</b> 决定。	signment re Date
В	99999	18478	į	9/4/2012	2	91	21	19013
Comments: WMM					Cl	Miri	PAI	

Well 3

API Number	Well	Name	QQ	Sec	Twp	Rng		County
4304752332	RW 12B4-23B		NESW	23	78	23E		UINTAH
Action Code	Current Entity Number	New Entity Number	S	pud Dal	e			signment ve Date
В	99999	18478		9/4/2012	2	9	121	12012
Comments:				i				

Comments: WMMFD

BHL: NWSW

#### **ACTION CODES:**

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity
- E Other (Explain in 'comments' section) RECEIVED

Valyn Davis

Name (Please Print)

Signature | Regulatory Affairs Analyst

9/10/2012

Title

Date

(5/2000)

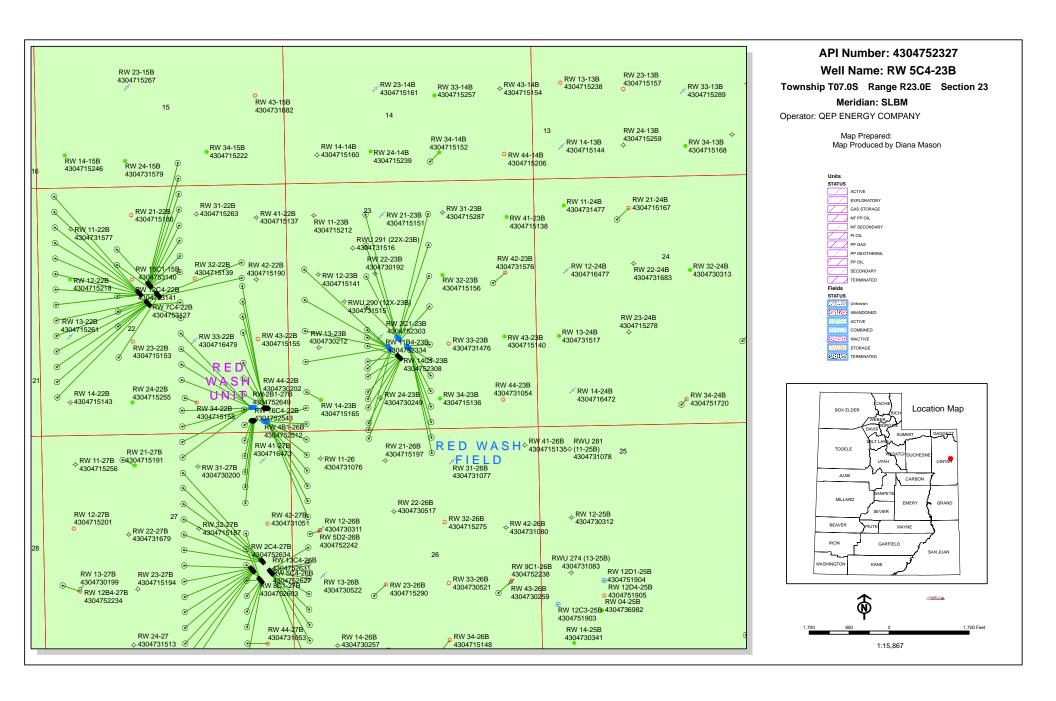
SEP 1 0 2012

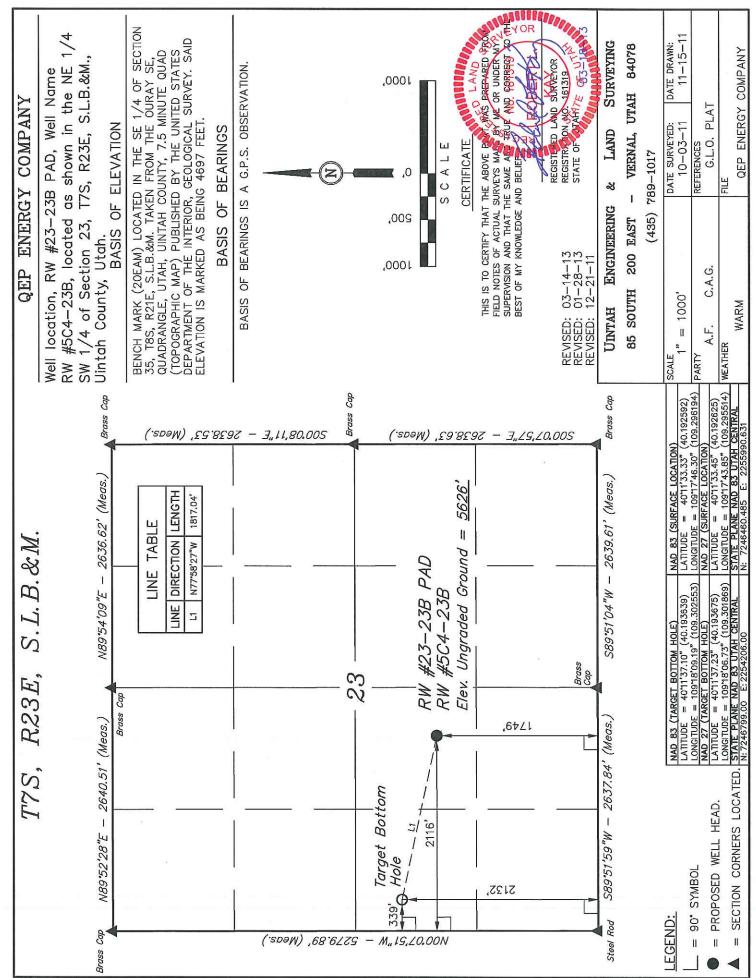
Sundry Number: 35831 API Well Number: 43047523270000

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU082
SUNDR	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for procurrent bottom-hole depth, FOR PERMIT TO DRILL form	oposals to drill new wells, significantly reenter plugged wells, or to drill horizo n for such proposals.	deepen existing wells below ntal laterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME: RED WASH
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: RW 5C4-23B
2. NAME OF OPERATOR: QEP ENERGY COMPANY			9. API NUMBER: 43047523270000
3. ADDRESS OF OPERATOR: 11002 East 17500 South,	Vernal, Ut, 84078 303	PHONE NUMBER: 3 308-3068 Ext	9. FIELD and POOL or WILDCAT: RED WASH
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1749 FSL 2116 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 23 Township: 07.0S Range: 23.0E Merio	dian: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
Approximate date work will start.	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
✓ DRILLING REPORT	L TUBING REPAIR		☐ WATER DISPOSAL
Report Date: 2/28/2013	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	OTHER	OTHER:
	COMPLETED OPERATIONS. Clearly show HIS WELL DURING THE MON		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY March 25, 2013
NAME (PLEASE PRINT) Valyn Davis	<b>PHONE NUME</b> 435 781-4369	Regulatory Affairs Analyst	
SIGNATURE N/A		DATE 3/25/2013	
14/73		J/2J/2013	

	STATE OF UTAH				FORM 9
I	DEPARTMENT OF NATURAL RESOURC DIVISION OF OIL, GAS, AND MIN			5.LEASE UTU08	DESIGNATION AND SERIAL NUMBER:
SUNDR	Y NOTICES AND REPORTS	ON \	WELLS	6. IF IND	IAN, ALLOTTEE OR TRIBE NAME:
	posals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.			7.UNIT o	or CA AGREEMENT NAME: ASH
1. TYPE OF WELL Gas Well				8. WELL RW 50	NAME and NUMBER: 4-23B
2. NAME OF OPERATOR: QEP ENERGY COMPANY		<b>9. API N</b> 43047	UMBER: 523270000		
3. ADDRESS OF OPERATOR: 11002 East 17500 South ,	Vernal, Ut, 84078 303	NE NUMBER: 3068 Ext	9. FIELD	and POOL or WILDCAT: ASH	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1749 FSL 2116 FWL				COUNTY	
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NESW Section: 2	3	STATE: UTAH			
11. CHECI	K APPROPRIATE BOXES TO INDICAT	TE NA	ATURE OF NOTICE, REPOR	RT, OR C	THER DATA
TYPE OF SUBMISSION		TYPE OF ACTION			
_	ACIDIZE		LTER CASING		CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	С	HANGE TUBING		CHANGE WELL NAME
	CHANGE WELL STATUS	☐ co	OMMINGLE PRODUCING FORMATIONS		CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	☐ FR	RACTURE TREAT		NEW CONSTRUCTION
	OPERATOR CHANGE	☐ PL	LUG AND ABANDON		PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RE	ECLAMATION OF WELL SITE		RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SII	DETRACK TO REPAIR WELL		TEMPORARY ABANDON
	TUBING REPAIR	U VE	ENT OR FLARE		WATER DISPOSAL
✓ DRILLING REPORT Report Date:	WATER SHUTOFF	☐ sı	TA STATUS EXTENSION		APD EXTENSION
3/31/2013	WILDCAT WELL DETERMINATION	□ o₁	THER	отн	ER:
	COMPLETED OPERATIONS. Clearly show a			6 <b>FO</b> I	Accepted by the Utah Division of il, Gas and Mining R RECORD ONLY April 02, 2013
NAME (PLEASE PRINT) Valyn Davis	<b>PHONE NUMB</b> 435 781-4369	BER	TITLE Regulatory Affairs Analyst		
SIGNATURE	100 101 1000	$\dashv$	DATE		
N/A		- 1	4/1/2013		

	STATE OF UTAH		FORM 9				
1	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MINI		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU082				
SUNDR	Y NOTICES AND REPORTS O	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:				
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	posals to drill new wells, significantly d reenter plugged wells, or to drill horizon n for such proposals.	eepen existing wells below tal laterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME: RED WASH				
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: RW 5C4-23B				
2. NAME OF OPERATOR: QEP ENERGY COMPANY	9. API NUMBER: 43047523270000						
3. ADDRESS OF OPERATOR: 11002 East 17500 South ,		PHONE NUMBER: 308-3068 Ext	9. FIELD and POOL or WILDCAT: RED WASH				
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1749 FSL 2116 FWL			COUNTY: UINTAH				
QTR/QTR, SECTION, TOWNSH	<b>HP, RANGE, MERIDIAN:</b> 23 Township: 07.0S Range: 23.0E Meridi	an: S	STATE: UTAH				
11. CHECI	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA				
TYPE OF SUBMISSION		TYPE OF ACTION					
7	ACIDIZE	ALTER CASING	CASING REPAIR				
NOTICE OF INTENT Approximate date work will start:	✓ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME				
4/1/2013	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE				
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION				
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK				
_	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION				
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON				
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL				
DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION				
Report Date:			_				
	WILDCAT WELL DETERMINATION	OTHER	OTHER:				
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  QEP ENERGY COMPANY WOULD LIKE TO OPTIMIZE THE BOTTOM HOLE SPACING OF THE MESA VERDE DEVELOPMENT. THEREFORE, QEP ENERGY COMPANY REQUESTS TO CHANGE THE BOTTOM HOLE LOCATION FOR THE ABOVE MENTIONED WELL. NEW BOTTOM HOLE FOOTAGES ARE: 2132' FSL, 339' FWL, NWSW, SEC. 23, T7S, R23E LATITUDE: 40.193639, LONGITUDE: 109.302553. PLEASE SEE ATTACHED: LEGAL PLAT, DIRECTIONAL PLANS  Approved by the Utah Division of Oil, Gas and Mining April 09, 2013  By: By:							
NAME (PLEASE PRINT) Valyn Davis	PHONE NUMBE	R TITLE Regulatory Affairs Analyst					
SIGNATURE	435 781-4369	DATE					
N/A		4/1/2013					







# **QEP ENERGY (UT)**

Red Wash 23-23B PAD RW 5C4-23B

**Original Hole** 

Plan: Plan ver.0

# **Standard Planning Report**

20 March, 2013





Wellbore:

Design:

## QEP Resources, Inc.

Planning Report



EDM QEP Database: Company: QEP ENERGY (UT) Project: Red Wash Site: 23-23B PAD Well: RW 5C4-23B

**Local Co-ordinate Reference:** TVD Reference: MD Reference: North Reference: **Survey Calculation Method:** 

Well RW 5C4-23B RKB @ 5642.30usft (SST 54) RKB @ 5642.30usft (SST 54) True

Minimum Curvature

Project Red Wash

US State Plane 1983 Map System: System Datum: Mean Sea Level

North American Datum 1983 Geo Datum:

Original Hole Plan ver.0

Utah Central Zone Map Zone: Using geodetic scale factor

23-23B PAD Site Northing: 7,246,686.310 usft Site Position: Latitude: 40.193199 From: Мар Easting: 2,256,158.369 usft Longitude: -109.295575 **Position Uncertainty:** 0.00 usft Slot Radius: 13-3/16 " **Grid Convergence:** 1.41 9

Well RW 5C4-23B, **Well Position** +N/-S -221.64 usft Northing: 7,246,460.485 usft Latitude: 40.192591 +E/-W -173.27 usft Easting: 2,255,990.631 usft Longitude: -109.296195 **Position Uncertainty** 0.00 usft Wellhead Elevation: 5,625.30 usft **Ground Level:** 5,625.30 usft

Wellbore Original Hole Magnetics **Model Name** Sample Date Declination Dip Angle Field Strength (nT) (°) (°) IGRF2010 12/7/2011 10.95 66.05 52,408

Design Plan ver.0 **Audit Notes:** Tie On Depth: Version: Phase: PLAN 0.00 Vertical Section: Depth From (TVD) +N/-S +E/-W Direction (usft) (usft) (usft) (°) 0.00 0.00 0.00 282.15

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,452.39	15.05	282.15	1,443.77	20.68	-96.03	2.00	2.00	0.00	282.15	
7,566.59	15.05	282.15	7,348.31	354.84	-1,647.85	0.00	0.00	0.00	0.00	
8,569.77	0.00	0.00	8,340.00	382.41	-1,775.89	1.50	-1.50	0.00	180.00	
11,359.77	0.00	0.00	11,130.00	382.41	-1,775.89	0.00	0.00	0.00	0.00	

3/20/2013 11:49:27AM Page 2 COMPASS 5000.1 Build 65



Design:

## **QEP Resources, Inc.**

Planning Report



Database: EDM\_QEP

Company: QEP ENERGY (UT)

Plan ver.0

 Project:
 Red Wash

 Site:
 23-23B PAD

 Well:
 RW 5C4-23B

 Wellbore:
 Original Hole

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well RW 5C4-23B

RKB @ 5642.30usft (SST 54) RKB @ 5642.30usft (SST 54)

True

Minimum Curvature

ned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	2.00	282.15	799.98	0.37	-1.71	1.75	2.00	2.00	0.00
900.00	4.00	282.15	899.84	1.47	-6.82	6.98	2.00	2.00	0.00
1,000.00	6.00	282.15	999.45	3.30	-15.34	15.69	2.00	2.00	0.00
1,100.00	8.00	282.15	1,098.70	5.87	-27.26	27.88	2.00	2.00	0.00
1,200.00	10.00	282.15	1,197.47	9.16	-42.55	43.52	2.00	2.00	0.00
1,300.00	12.00	282.15	1,197.47	13.18	-42.33 -61.20	62.60	2.00	2.00	0.00
1,400.00	14.00	282.15	1,393.06	17.91	-83.19	85.10	2.00	2.00	0.00
									0.00
1,452.39	15.05	282.15	1,443.77	20.68	-96.03	98.23	2.00	2.00	
1,500.00	15.05	282.15	1,489.75	23.28	-108.12	110.60	0.00	0.00	0.00
1,600.00	15.05	282.15	1,586.32	28.75	-133.50	136.56	0.00	0.00	0.00
1,700.00	15.05	282.15	1,682.89	34.21	-158.88	162.52	0.00	0.00	0.00
1,800.00	15.05	282.15	1,779.46	39.68	-184.26	188.48	0.00	0.00	0.00
1,900.00	15.05	282.15	1,876.03	45.14	-209.64	214.44	0.00	0.00	0.00
2,000.00	15.05	282.15	1,972.60	50.61	-235.02	240.41	0.00	0.00	0.00
2,100.00	15.05	282.15	2,069.17	56.07	-260.40	266.37	0.00	0.00	0.00
2,200.00	15.05	282.15	2,165.74	61.54	-285.78	292.33	0.00	0.00	0.00
2,300.00	15.05	282.15	2,262.32	67.00	-311.16	318.29	0.00	0.00	0.00
2,400.00	15.05	282.15	2,358.89	72.47	-336.54	344.26	0.00	0.00	0.00
2,500.00	15.05	282.15	2,455.46	77.93	-361.92	370.22	0.00	0.00	0.00
2,600.00	15.05	282.15	2,552.03	83.40	-387.30	396.18	0.00	0.00	0.00
2,700.00	15.05	282.15	2,648.60	88.86	-412.68	422.14	0.00	0.00	0.00
2,800.00	15.05	282.15	2,745.17	94.33	-438.06	448.11	0.00	0.00	0.00
2,900.00	15.05	282.15	2,841.74	99.80	-463.45	474.07	0.00	0.00	0.00
2,952.04	15.05	282.15	2,892.00	102.64	-476.65	487.58	0.00	0.00	0.00
Green River 3,000.00	15.05	282.15	2,938.31	105.26	-488.83	500.03	0.00	0.00	0.00
3,100.00	15.05	282.15	3,034.88	110.73	-514.21	525.99	0.00	0.00	0.00
3,157.07	15.05	282.15	3,034.66	113.85	-514.21 -528.69	525.99 540.81	0.00	0.00	0.00
Top of Birds		202.10	5,555.55		520.00	5 10.01	0.00	0.00	0.00
•		202.45	3.131.45	116 10	E20 E0	EE1 00	0.00	0.00	0.00
3,200.00	15.05	282.15	.,	116.19	-539.59	551.96 577.03	0.00	0.00	0.00
3,300.00	15.05	282.15	3,228.03	121.66	-564.97	577.92	0.00	0.00	0.00
3,395.24	15.05	282.15	3,320.00	126.86	-589.14	602.64	0.00	0.00	0.00
3,400.00		202.15	3,324.60	107 10	500 2F	602 00	0.00	0.00	0.00
3,400.00 3,500.00	15.05 15.05	282.15 282.15	3,324.60 3,421.17	127.12 132.59	-590.35 -615.73	603.88 629.84	0.00 0.00	0.00 0.00	0.00
3,600.00	15.05	282.15	3,517.74	138.05	-641.11	655.80	0.00	0.00	0.00
3,700.00	15.05	282.15	3,614.31	143.52	-666.49	681.77	0.00	0.00	0.00
3,700.71	15.05	282.15	3,615.00	143.56	-666.67	681.95	0.00	0.00	0.00
Mahogony E									
3,752.49	15.05	282.15	3,665.00	146.39	-679.81	695.39	0.00	0.00	0.00
7-5/8"									
3,800.00	15.05	282.15	3,710.88	148.98	-691.87	707.73	0.00	0.00	0.00
3,900.00	15.05	282.15	3,807.45	154.45	-717.25	733.69	0.00	0.00	0.00
4,000.00	15.05	282.15	3,904.02	159.91	-742.63	759.65	0.00	0.00	0.00
4,100.00	15.05	282.15	4,000.59	165.38	-768.01	785.62	0.00	0.00	0.00
4,200.00	15.05	282.15	4,097.16	170.84	-793.39	811.58	0.00	0.00	0.00



## **QEP** Resources, Inc.

Planning Report



Database: EDM\_QEP

Company: QEP ENERGY (UT)

 Project:
 Red Wash

 Site:
 23-23B PAD

 Well:
 RW 5C4-23B

 Wellbore:
 Original Hole

 Design:
 Plan ver.0

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well RW 5C4-23B

RKB @ 5642.30usft (SST 54) RKB @ 5642.30usft (SST 54)

True

Minimum Curvature

JII.	Flail Vel.U								
nned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,300.00	15.05	282.15	4,193.74	176.31	-818.77	837.54	0.00	0.00	0.00
4,400.00	15.05	282.15	4,290.31	181.78	-844.15	863.50	0.00	0.00	0.00
4,500.00	15.05	282.15	4,386.88	187.24	-869.53	889.47	0.00	0.00	0.00
4,600.00	15.05	282.15	4,483.45	192.71	-894.91	915.43	0.00	0.00	0.00
4,700.00	15.05	282.15	4,580.02	198.17	-920.30	941.39	0.00	0.00	0.00
4,800.00	15.05	282.15	4,676.59	203.64	-945.68	967.35	0.00	0.00	0.00
4,900.00	15.05	282.15	4,773.16	209.10	-971.06	993.31	0.00	0.00	0.00
5,000.00	15.05	282.15	4,869.73	214.57	-996.44	1,019.28	0.00	0.00	0.00
5,100.00	15.05	282.15	4,966.30	220.03	-1,021.82	1,045.24	0.00	0.00	0.00
5,200.00	15.05	282.15	5,062.87	225.50	-1,047.20	1,071.20	0.00	0.00	0.00
5,300.00	15.05	282.15	5,159.45	230.96	-1,072.58	1,097.16	0.00	0.00	0.00
E 400 00	15.05	282.15	5,256.02	236.43	1 007 06	1 100 10	0.00	0.00	0.00
5,400.00 5,500.00	15.05	282.15 282.15	5,256.02 5,352.59	236.43 241.89	-1,097.96 -1,123.34	1,123.13 1,149.09	0.00	0.00	0.00
5,600.00	15.05	282.15	5,352.59 5,449.16	241.09	-1,123.34 -1,148.72	1,149.09	0.00	0.00	0.00
5,696.14	15.05	282.15	5,542.00	252.61	-1,173.12	1,173.03	0.00	0.00	0.00
Base of Mo		202.10	5,512.00	202.01	.,	.,200.01	5.00	3.00	0.00
5,700.00	15.05	282.15	5,545.73	252.82	-1,174.10	1,201.01	0.00	0.00	0.00
5,800.00	15.05	282.15	5,642.30	258.29	-1,199.48	1,226.98	0.00	0.00	0.00
5,900.00	15.05	282.15	5,738.87	263.75	-1,224.86	1,252.94	0.00	0.00	0.00
6,000.00	15.05	282.15	5,835.44	269.22	-1,250.24	1,278.90	0.00	0.00	0.00
6,100.00	15.05	282.15	5,932.01	274.69	-1,275.62	1,304.86	0.00	0.00	0.00
6,200.00	15.05	282.15	6,028.58	280.15	-1,301.00	1,330.82	0.00	0.00	0.00
6,300.00	15.05	282.15	6,125.16	285.62	-1,326.38	1,356.79	0.00	0.00	0.00
6,301.91	15.05	282.15	6,127.00	285.72	-1,326.87	1,357.28	0.00	0.00	0.00
Wasatch	15.05	202.45	6 224 72	204.00	1 251 76	1 202 75	0.00	0.00	0.00
6,400.00 6,500.00	15.05 15.05	282.15 282.15	6,221.73 6,318.30	291.08 296.55	-1,351.76 -1,377.15	1,382.75 1,408.71	0.00 0.00	0.00 0.00	0.00 0.00
6,600.00	15.05	282.15	6,414.87	302.01	-1,402.53	1,434.67	0.00	0.00	0.00
6,700.00	15.05	282.15	6,511.44	307.48	-1,427.91	1,460.64	0.00	0.00	0.00
6,800.00	15.05	282.15	6,608.01	312.94	-1,453.29	1,486.60	0.00	0.00	0.00
6,900.00	15.05	282.15	6,704.58	318.41	-1,478.67	1,512.56	0.00	0.00	0.00
7,000.00 7,100.00	15.05	282.15	6,801.15	323.87	-1,504.05 -1,529.43	1,538.52	0.00	0.00	0.00
7,100.00	15.05	282.15	6,897.72	329.34	-1,529.43	1,564.49	0.00	0.00	0.00
7,200.00	15.05	282.15	6,994.29	334.80	-1,554.81	1,590.45	0.00	0.00	0.00
7,300.00	15.05	282.15	7,090.87	340.27	-1,580.19	1,616.41	0.00	0.00	0.00
7,400.00	15.05	282.15	7,187.44	345.73	-1,605.57	1,642.37	0.00	0.00	0.00
7,500.00	15.05	282.15	7,284.01	351.20	-1,630.95	1,668.34	0.00	0.00	0.00
7,566.59	15.05	282.15	7,348.31	354.84	-1,647.85	1,685.62	0.00	0.00	0.00
7,600.00	14.55	282.15	7,380.62	356.63	-1,656.19	1,694.16	1.50	-1.50	0.00
7,700.00	13.05	282.15	7,477.73	361.65	-1,679.51	1,718.00	1.50	-1.50	0.00
7,800.00	11.55	282.15	7,575.43	366.14	-1,700.33	1,739.30	1.50	-1.50	0.00
7,900.00	10.05	282.15	7,673.66	370.08	-1,718.64	1,758.03	1.50	-1.50	0.00
8,000.00	8.55	282.15	7,772.34	373.48	-1,734.43	1,774.19	1.50	-1.50	0.00
8,100.00	7.05	282.15	7,871.41	376.34	-1,747.69	1,787.75	1.50	-1.50	0.00
8,200.00	5.55	282.15	7,970.81	378.65	-1,758.41	1,798.72	1.50	-1.50	0.00
8,300.00	4.05	282.15	8,070.46	380.41	-1,766.59	1,807.08	1.50	-1.50	0.00
8,400.00	2.55	282.15	8,170.29	381.62	-1,772.21	1,812.83	1.50	-1.50	0.00
8,500.00	1.05	282.15	8,270.24	382.28	-1,775.27	1,815.96	1.50	-1.50	0.00
8,569.77	0.00	0.00	8,340.00	382.41	-1,775.89	1,816.60	1.50	-1.50	0.00
Mesaverde									
8,600.00	0.00	0.00	8,370.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
8,700.00	0.00	0.00	8,470.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
8,800.00	0.00	0.00	8,570.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00



## QEP Resources, Inc.

Planning Report



Database: Company: Project:

Site:

EDM\_QEP

QEP ENERGY (UT)

Red Wash 23-23B PAD

Well: RW 5C4-23B
Wellbore: Original Hole
Design: Plan ver.0

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well RW 5C4-23B

RKB @ 5642.30usft (SST 54) RKB @ 5642.30usft (SST 54)

True

Minimum Curvature

ned Survey									_
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,900.00	0.00	0.00	8,670.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
9,000.00	0.00	0.00	8,770.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
9,100.00	0.00	0.00	8,870.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
9,200.00	0.00	0.00	8,970.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
9,300.00	0.00	0.00	9,070.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
9,400.00	0.00	0.00	9,170.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
9,500.00	0.00	0.00	9,270.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
9,600.00	0.00	0.00	9,370.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
9,700.00	0.00	0.00	9,470.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
9,800.00	0.00	0.00	9,570.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
9,900.00	0.00	0.00	9,670.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
10,000.00	0.00	0.00	9,770.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
10,100.00	0.00	0.00	9,870.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
10,200.00	0.00	0.00	9,970.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
10,300.00	0.00	0.00	10,070.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
10,400.00	0.00	0.00	10,170.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
10,500.00	0.00	0.00	10,270.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
10,594.77	0.00	0.00	10,365.00	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
Neslen									
10,600.00	0.00	0.00	10,370.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
10,700.00	0.00	0.00	10,470.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
10,800.00	0.00	0.00	10,570.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
10,900.00	0.00	0.00	10,670.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
10,971.77	0.00	0.00	10,742.00	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
Lower Nesle									
11,000.00	0.00	0.00	10,770.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
11,100.00	0.00	0.00	10,870.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
11,159.77	0.00	0.00	10,930.00	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
Sego									
11,200.00	0.00	0.00	10,970.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
11,300.00	0.00	0.00	11,070.23	382.41	-1,775.89	1,816.60	0.00	0.00	0.00
11,359.77	0.00	0.00	11,130.00	382.41	-1,775.89	1,816.60	0.00	0.00	0.00

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
RW 5C4-23B - plan hits target cent - Circle (radius 150.0		0.00	8,340.00	382.41	-1,775.89	7,246,799.000	2,254,206.000	40.193640	-109.302552

Casing Points					
	Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
	(usft)	(usft)	Name	(")	(")
	3,752.49	3,665.00 7-5/8"		7-5/8	9-7/8



# **QEP** Resources, Inc.

Planning Report



Database: EDM\_QEP

Company: QEP ENERGY (UT)
Project: Red Wash

 Site:
 23-23B PAD

 Well:
 RW 5C4-23B

 Wellbore:
 Original Hole

 Design:
 Plan ver.0

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well RW 5C4-23B

RKB @ 5642.30usft (SST 54) RKB @ 5642.30usft (SST 54)

True

Minimum Curvature

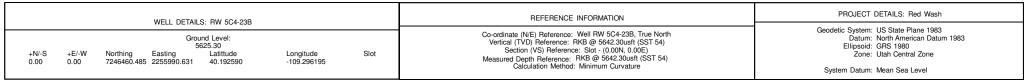
Formations							
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	2,952.04	2,892.00	Green River				
	3,157.07	3,090.00	Top of Birds Nest				
	3,395.24	3,320.00	Base of Birds Nest				
	3,700.71	3,615.00	Mahogony Bench				
	5,696.14	5,542.00	Base of Mod Saline				
	6,301.91	6,127.00	Wasatch				
	8,569.77	8,340.00	Mesaverde				
	10,594.77	10,365.00	Neslen				
	10,971.77	10,742.00	Lower Neslen				
	11,159.77	10,930.00	Sego				

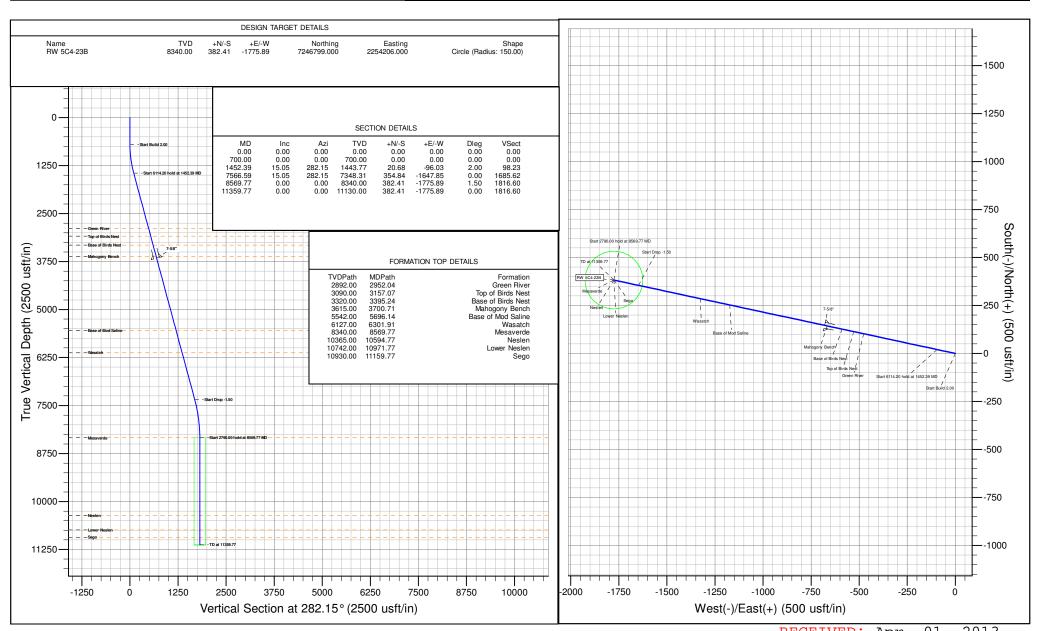


Company Name: QEP ENERGY (UT)

Azimutis to Trus North Magnetic North: 10,35° A Magnetic North: 10,35° A Magnetic Field Strengtir. 52408.481' Dip Angle: 68,05° Date: 12/7/2011 Model: 61,77/2011

Project: Red Wash Site: 23-23B PAD Well: RW 5C4-23B Wellbore: Original Hole Design: Plan ver.0





	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURG DIVISION OF OIL, GAS, AND MII		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU082
SUNDR	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for procurrent bottom-hole depth, FOR PERMIT TO DRILL form	oposals to drill new wells, significantly reenter plugged wells, or to drill horizon n for such proposals.	deepen existing wells below ontal laterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME: RED WASH
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: RW 5C4-23B
2. NAME OF OPERATOR: QEP ENERGY COMPANY			9. API NUMBER: 43047523270000
3. ADDRESS OF OPERATOR: 11002 East 17500 South,	Vernal, Ut, 84078 303	PHONE NUMBER: 3 308-3068 Ext	9. FIELD and POOL or WILDCAT: RED WASH
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1749 FSL 2116 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	<b>HIP, RANGE, MERIDIAN:</b> 23 Township: 07.0S Range: 23.0E Meri	dian: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
Approximate date work will start.	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
✓ DRILLING REPORT	L TUBING REPAIR	☐ VENT OR FLARE ☐	☐ WATER DISPOSAL ☐
Report Date: 4/30/2013	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
1,00,2010	WILDCAT WELL DETERMINATION	OTHER	OTHER:
	COMPLETED OPERATIONS. Clearly show THIS WELL DURING THE MO		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY May 08, 2013
NAME (PLEASE PRINT) Valyn Davis	PHONE NUME 435 781-4369	BER TITLE Regulatory Affairs Analyst	
SIGNATURE	100 101 1000	DATE	
N/A		5/2/2013	

RECEIVED: May. 02, 2013

Sundry Number: 38975 API Well Number: 43047523270000

	STATE OF UTAH				FORM 9
[	DEPARTMENT OF NATURAL RESOU DIVISION OF OIL, GAS, AND N		3	5.LEASE DESIGNATION UTU082	N AND SERIAL NUMBER:
SUNDR	Y NOTICES AND REPORT	S ON	WELLS	6. IF INDIAN, ALLOTTE	E OR TRIBE NAME:
Do not use this form for pro current bottom-hole depth, r FOR PERMIT TO DRILL form	posals to drill new wells, significant reenter plugged wells, or to drill hori n for such proposals.	tly deep izontal l	en existing wells below aterals. Use APPLICATION	7.UNIT or CA AGREEM RED WASH	ENT NAME:
1. TYPE OF WELL Gas Well				8. WELL NAME and NU RW 5C4-23B	MBER:
2. NAME OF OPERATOR: QEP ENERGY COMPANY				9. API NUMBER: 43047523270000	
3. ADDRESS OF OPERATOR: 11002 East 17500 South,	Vernal, Ut, 84078 3		NE NUMBER: -3068 Ext	9. FIELD and POOL or RED WASH	WILDCAT:
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1749 FSL 2116 FWL				COUNTY: UINTAH	
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NESW Section: 2	S	STATE: UTAH			
11. CHECH	K APPROPRIATE BOXES TO INDIC	CATE N	ATURE OF NOTICE, REPOR	T, OR OTHER DATA	
TYPE OF SUBMISSION			TYPE OF ACTION		
	ACIDIZE		ALTER CASING	CASING REPAIR	
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING	CHANGE WELL NA	AME
Approximate date work will start.	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL T	YPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	□ F	FRACTURE TREAT	NEW CONSTRUCT	TION
	OPERATOR CHANGE		PLUG AND ABANDON	PLUG BACK	
SPUD REPORT	PRODUCTION START OR RESUME		RECLAMATION OF WELL SITE	RECOMPLETE DIE	FERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	TEMPORARY ABA	
✓ DRILLING REPORT	L TUBING REPAIR		/ENT OR FLARE	WATER DISPOSAL	
Report Date: 5/31/2013	☐ WATER SHUTOFF ☐	□ s	SI TA STATUS EXTENSION	APD EXTENSION	
5,6.7.20.0	WILDCAT WELL DETERMINATION	_	OTHER	OTHER:	
	COMPLETED OPERATIONS. Clearly sho			Accepted I Utah Divis Oil, Gas and FOR RECO June 12, 2	ion of Mining ORD ONLY
NAME (PLEASE PRINT) Valyn Davis	<b>PHONE NUI</b> 435 781-4369	MBER	TITLE Regulatory Affairs Analyst		
SIGNATURE N/A			<b>DATE</b> 6/10/2013		

	STATE OF UTAH		FORM 9		
ı	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU082		
SUNDR	Y NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	posals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.	deepen existing wells below ntal laterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME: RED WASH		
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: RW 5C4-23B		
2. NAME OF OPERATOR: QEP ENERGY COMPANY			9. API NUMBER: 43047523270000		
3. ADDRESS OF OPERATOR: 11002 East 17500 South,	PHONE NUMBER: 3 308-3068 Ext	9. FIELD and POOL or WILDCAT: RED WASH			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1749 FSL 2116 FWL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NESW Section: 2	dian: S	STATE: UTAH			
11. CHECI	K APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
	ACIDIZE	ALTER CASING	CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME		
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION		
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK		
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON		
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL		
DRILLING REPORT     Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION		
6/30/2013	WILDCAT WELL DETERMINATION	OTHER	OTHER:		
			<u>,                                      </u>		
l .	COMPLETED OPERATIONS. Clearly show  I THIS WELL DURING THE M		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY July 02, 2013		
NAME (PLEASE PRINT) Valyn Davis	<b>PHONE NUME</b> 435 781-4369	SER TITLE Regulatory Affairs Analyst			
SIGNATURE	.,	DATE			
N/A		7/2/2013			

RECEIVED: Jul. 02, 2013

# BLM - Vernal Field Office - Notification Form

Operator <u>QEP</u> Rig Name/# <u>SST 54</u> Submitted By
MURRAY BECKER Phone Number 435-828-0315
Well Name/Number RW 5C4-23B  Otr/Qtr NE/SW Section 23 Township 7 S Range 23 E  Lease Serial Number UTU 082  API Number 43047523290000  Spud Notice — Spud is the initial spudding of the well, not drilling out below a casing string.
out below a casing string.
Date/Time AM
Casing – Please report time casing run starts, not cementing times.  Surface Casing Intermediate Casing Production Casing Liner Other
Date/Time AM
BOPE  ☐ Initial BOPE test at surface casing point ☐ BOPE test at intermediate casing point ☐ 30 day BOPE test ☐ Other ☐ Other ☐ PECEIVED  JUL 08 2013  DIV. OF OIL, GAS & MINING
Date/Time <u>07/09/2013 @ 02:00</u> AM 🔀 PM 🗌

# Remarks <u>THIS TIME WILL BE CLOSE. WILL TEST BOP AFTER WE SKID RIG BACK TO THE RW 5C4-23B FROM THE RW 12B1-23B</u>

Sundry Number: 41507 API Well Number: 43047523270000

			1		
	STATE OF UTAH		FORM 9		
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINIF		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU082		
SUNDR	RY NOTICES AND REPORTS O	N WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
	oposals to drill new wells, significantly de reenter plugged wells, or to drill horizont n for such proposals.		7.UNIT or CA AGREEMENT NAME: RED WASH		
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: RW 5C4-23B		
2. NAME OF OPERATOR: QEP ENERGY COMPANY	9. API NUMBER: 43047523270000				
3. ADDRESS OF OPERATOR: 11002 East 17500 South,		HONE NUMBER: 08-3068 Ext	9. FIELD and POOL or WILDCAT: RED WASH		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1749 FSL 2116 FWL	COUNTY: UINTAH				
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NESW Section: 2	n: S	STATE: UTAH			
11. CHEC	K APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPOR	RT, OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
	ACIDIZE	ALTER CASING	CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME		
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION		
8/18/2013	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK		
SPUD REPORT	✓ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON		
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL		
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION		
	WILDCAT WELL DETERMINATION	OTHER	OTHER:		
42 DESCRIPE PROPOSED OR	COMPLETED OPERATIONS. Clearly show all	wartinant dataila inalisdina dataa	<u>'——</u>		
	ENCED PRODUCTION ON AUG A.M.		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY September 12, 2013		
NAME (PLEASE PRINT) Benna Muth	<b>PHONE NUMBER</b> 435 781-4320	R TITLE Regulatory Assistant			
SIGNATURE N/A		<b>DATE</b> 8/19/2013			

(5/2000)

			DEPAR DIVISIO	TMEN	TATE OF NA FOIL,	TURAL	RESO			D 109 L 21	35' 01 FSL	(i	nighlight	D REPOR changes) ESIGNATION 82		3.63.38ems	RM 8 ER:
WELL	_ CON	/IPLE	TION (	OR F	RECO	MPL	ETIO	N RE	EPOR	TANE	LOG	6.	IF INDIAN	, ALLOTTEE	OR TRIB	ENAME	
1a. TYPE OF WELL:		C	VELL		GAS Z	1	DRY [	1	OTHE	R		7.		A AGREEME	NT NAM	<b>=</b>	
b. TYPE OF WORK	QII		, LLL —		WELL DE	=	-			10		_   _	RED WASH  8. WELL NAME and NUMBER:				
WELL	HORIZ. L	] [	N		RE- ENTRY	]	DIFF. RESVR.		OTHE	ER				C4-23B			
2. NAME OF OPERA		OMPAI	٧Y									9.	43047	UMBER: 04752327			
3. ADDRESS OF OP			OITY VEI	RNAI		STATE	UT	7IP 840	)78	120000000000000000000000000000000000000	NUMBER: 5) 781-4320	100		D POOL, OF WASH	WLDCA	Л	
4. LOCATION OF WELL (FOOTAGES)  AT SUBFACE: NESW 17/10' FSL 2116' FWI																	
								0440				1	1ESW	23	7S :	23E	
AT TOP PRODUC	CING INTER	RVAL REPO	RTED BEL	ow: N	IESW,	1749	)' FSL,	2116	FWL			L					
AT TOTAL DEPTH: NWSW, 2001' FSL, 345' FWL										1000	COUNTY		13	B. STATE (	JTAH		
14. DATE SPUDDED 9/4/2012	D:	15. DATE 7/15/2		HED:	16. DATE	COMPL 3/2013		F	BANDONE	ED 🔲	READY TO PROD	UCE 🗸		EVATIONS (I		RT, GL):	
18. TOTAL DEPTH:	MD 1	1,197	1	9. PLUG	BACK T.D	.: MD			20. IF N	ULTIPLE CO	OMPLETIONS, HO	W MANY?		PTH BRIDGI	E MD		
	TVD 1					TVD							ľ	LUG SET.	TVD		
22. TYPE ELECTRIC	AND OTH	ER MECHA	NICAL LOG	S RUN (	Submit cop	y of each	)			23.	000500		ه احا	V=0 [	10.1		
CBL										WAS WEL WAS DST DIRECTIO				YES YES YES	(Subm	it analysis) it report) it copy)	
24. CASING AND LI	NER RECO	RD (Report	t all strings	set in w	ell)												***************************************
HOLE SIZE	SIZE/GI	RADE	WEIGHT	(#/ft.)	TOP (	MD)	вотто	M (MD)		EMENTER PTH	CEMENT TYPE & NO. OF SACKS		.URRY IME (BBL)	CEMENT	TOP **	AMOUNT	PULLED
12.25	7.625	L-80	26.	4	C	)	22	25									
9.875	7.625	L-80	26.	4	22	5	3,8	346			82	0 2	287	10	00		
6.75	4.5	HC <b>₽</b>	11.	6	0		11,	163			1,14	<b>6</b>	410				
**************************************																	
															-		
25. TUBING RECOR	RD		_														
SIZE		H SET (MD)	PACKE	ER SET (	MD)	SIZE		DEPTH	SET (MD)	PACKE	R SET (MD)	SIZE	_	DEPTH SET	(MD)	PACKER S	ET (MD)
2.375		),923	J.,														
26. PRODUCING IN	A-ANTERNA	TO	P (MD)	BOTTO	OM (MD)	TOP	(T\/D\	POTTO	M (TVD)		L (Top/Bot - MD)	SIZE	NO. HO	NEC I	DEDECO	ATION STAT	ri ie
(A) MESA VE	25.0(8)(1525)	_	726		,050	TOF	(TVD)	ВОПО	W (TVD)	9,726	11,050	.42				Squeezed	7
(B)	INDL	1 3,	720	2 43	,030					9,720	11,030	.42	20	Oper	=	Squeezed	_
		-							-			-	+-	Oper	=	Squeezed	=
(C) (D)		+	-											Oper	=	Squeezed	=
28. ACID, FRACTUR	DE TREAT	MENT CEN	ENT SOLE	EZE ET	c	6%								Орег		Squeezeu	
	INTERVAL	WEIGH, OLIV	T SQUE	-1-6L; L I	<b>.</b>	-			A NAC	NUME AND T	YPE OF MATERIA						
2			12.0	42 DE	1001	ICION	ATED	. 000			0 SAND						
9,726 - 11,0	00		12,8	43 BE	SLS SL	ICKW	AIER	; 208	, 126 LI	35 30/5	USAND					*****************	
			-				-										
29. ENCLOSED AT	TACHMENT	S:									WEST STREET, S	veter	900000	I	30. WELI	STATUS:	
ELECTI	RICAL/MEC	HANICAL L		CEMENT	「VERIFICÆ	ATION	=	GEOLOGI CORE AN	C REPOR		DST REPORT OTHER: OPS		ECTIONAL IARY			PGW	

(CONTINUED ON BACK)

31. INITIAL PRO	DUCTION					INT	ERVAL A (As show	vn in item #26)					
8/18/2013			TEST DATE 8/22/2			HOURS TESTED	); 24	TEST PRODUCTION RATES: →	OIL – BBL:	GAS - MCF: 1,299	WATER -		PROD. METHOD: FLOWS
CHOKE SIZE: 26/64	твс. pres 694	640200	CSG. PRES 1,51	25549	AVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL:	GAS - MCF: 1,299	WATER -		INTERVAL STATUS:
N <del>e</del>	-					INT	ERVAL B (As show	vn in item #26)			•		
DATE FIRST PRO	ODUCED:		TEST DATI	E:				TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	GAS - MCF: WATER - B		PROD. METHOD:
CHOKE SIZE:	TBG. PRES	SS.	CSG. PRES	SS. API GR	AVITY	BTU – GAS GAS/OIL RATIO 24 HR PRODUCTION OIL – BBL: GAS – MCF: WATER – RATES: →				- BBL:	INTERVAL STATUS:		
Desire Control of the	l.		)	L.		INT	ERVAL C (As show	vn in item #26)					
DATE FIRST PRO	ODUCED:		TEST DAT	E:		HOURS TESTED	D:	TEST PRODUCTION RATES: →	OIL – BBL;	GAS - MCF:	WATER -	- BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRES	SS.	CSG. PRES	SS. API GR	AVITY			24 HR PRODUCTION RATES: →	N OIL – BBL:	GAS - MCF:	WATER -	- BBL:	INTERVAL STATUS:
N					****	INT	ERVAL D (As show	vn in item #26)				1	<u> </u>
DATE FIRST PRO	ODUCED:		TEST DAT	E:		HOURS TESTED	):	TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER -	- BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRES	SS.	CSG. PRE	SS. API GR	AVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	N OIL - BBL;	GAS - MCF:	WATER -	- BBL:	INTERVAL STATUS:
32. DISPOSITIO	N OF GAS (	Sold, U	sed for Fu	el, Vented, Etc	:.)	1							
33. SUMMARY OF POROUS ZONES (Include Aquifers):  34. FORMATION (Log) MARKE									(Log) MARKERS:				
Show all importar tested, cushion us							n tests, including de	pth interval					
Formatio	Formation Top Bottom (MD) (MD)				Descript	tions, Contents, etc			Name		(1	Top Measured Depth)	
				**					GREEN RIVER MAHOGANY MARKER WASATCH MESA VERDE SEGO				2,971 3,746 6,266 8,626 11,110
35. ADDITIONAL	L REMARKS	(Inclu	de pluggin	g procedure)									
36. I hereby cert	tify that the	forego	ing and att	tached informa	ition is c	omplete and corre	ect as determined	from all available rec	cords.		Y		
NAME (PLEASI		<del>-</del>								' ASSISTAN'	T - COI	NTRA	VCT
SIGNATURE_	7	30	ma	Sm	iti	L			7/2013	7,100,101,711			
<ul><li>drilling</li><li>recom</li></ul>	leting or p g horizont npleting to	luggi al late a dif	ng a new erals fror ferent pr	v well n an existin oducing for	g well t mation	oore •	significantly d drilling hydrod	oreviously plugge deepening an exist carbon explorator	sting well bore ry holes, such	below the prev	rious bott es and str	om-ho ratigra	le depth phic tests

\*\* ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to:

Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210

Fax:

Phone: 801-538-5340

Box 145801

Salt Lake City, Utah 84114-5801

801-359-3940

(5/2000)

API Well Number: 43047523270000

Surface Legal Location 023007S023E27



43-047-52327

# **Daily Activity and Cost Summary**

State

UTAH

Well Configuration Type

Vertical

Field Name

**RED WASH** 

Well Name: RW 5C4-23B

Ground Elevatio		Flange Elevation (ft) Curre 5,625.30	ent KB to GL (ft) 22.80	KB to CF (ft)	Spud Date 2.80 9/4/2012 0	7:00	Final Rig Release 7/19/2013 02:00					
Job Category	5,625.3	Primary Job Type	22.60	Secondary Job Type	2.00 9/4/2012 0	Objective	7/19/2013 02.00					
DRILLING		DRILLING		DEVELOPMEN'	Ţ.							
Start Date	Δ	/25/2013		Job End Date	7/19	/2013						
Purpose		72072010		l.	7710	12010						
Summary												
Carminary							4					
Contractor SST Energy			RIG SST 54		Rig Type ROTARY RIG							
Contractor		ESSAIN V	RIG		Rig Type							
SST Energy			SST 54		TOP DRIVE							
DOL	8/7/2012	PRE-SPUD COSTS			ummary							
	4/25/2013		EDADE TO DOIL	I SLIDENCE								
	4/25/2013	100	SKID RIG, NIPPLE UP PREPARE TO DRILL SURFACE RIG UP, WELD CONDUCTOR, CUT DRILL LINE, DRILL 12 1/4" HOLE, TRIP CHANGE TO 9 7/8" BIT, DRILL AHEAD									
5.0	14/23/2013	ING OF, WEED CONDOO!	ON, OUT BINEL	. LINE, DIVILL 12	174 FIOLE, THE OFFICE	NOL 10 3	770 DIT, DITIEL THIEAD					
4.0	4/26/2013	DRILL, WIPER TRIP TO C	ONDUCTOR, DF	RILL, TRIP FOR	PLUGGED STRING X 2	1						
5.0	4/27/2013	DRILL, WORK STUCK PIP TRIP OUT, PICK UP FISHI	E SPOTTING W NG TOOLS	ATER, SAPP SI	VEEPS AND DIESEL, F	REE POIN	IT AND BACK OFF PIPE,					
6.0	4/28/2013					ON TOP C	OF FISH AND SCREW INTO					
1		FISH JARR 4 TIMES AND	FISH BECAME F	REE, TRIP OUT	WITH FISH,		the in-					
7.0	4/29/2013	DRILL TO T.D. @ 3854', C REAM TO BOTTOM, SPO 5/8" SURFACE CASING										
8.0	4/30/2013	CEMENT SURFACE CASI WELL HEAD, PREP FOR		EMENT, RUN TO	OP JOB, WAIT ON CEN	IENT, CUT	CONDUCTOR WELD ON					
9.0	7/8/2013	SKID,NIPPLE UP, TEST, INSPECT BHA										
10.0	7/9/2013	TROUBLE SHOOT MWD, INSPECT BHA, TRIP IN, DRILL SHOE TRACK, FIT, DRILL AHEAD										
11.0	7/10/2013	DIRECTIONAL DRILL, SURVEY, RIG SERVICE										
12.0	7/11/2013	DIRECTIONAL DRILL FROM 6481 TO 7110, RIG SERVICE, DRILL FROM 7110 TO 8118										
13.0	7/12/2013	DRILL FROM 8118 TO 8433, RIG SERVICE, DRILL FROM 8433 TO 9251'										
14.0	7/13/2013	DRILL FROM 9251' TO 9588', WORK STUCK PIPE FREE @9588', DRILL FROM 9588' TO 9755', TRIP FOR BIT										
15.0	7/14/2013	SLIP AND CUT DRILL LINE, TRIP IN ', WASH AND REAM LAST 2 STAND STO BOTTOM, DRILL FROM 9755' TO 10599', CHANGE OUT MUD LINE "O" RING										
16.0	7/15/2013	DRILL FROM 10,599' TO 1 CONNECTIONS, DRILL FR										
17.0	7/16/2013	TRIP OUT OF HOLE, REP DRILL COLLARS, MAKE U WOULDN'T DRILL, TRIP (	JP BIT AND MOT	TOR, TRIP INTO	SHOE, CIRCULATE BO	OTTOMS U	JP, HIT BRIDGE,					
18.0	7/17/2013	TRIP IN HOLE, SAFETY R BOTTOMS UP SPOT WAL 30'/MIN PULL WEAR BU	NUT, RIG UP TI	HRU-BIT WIREL	INE AND DEPLOY LOG							
19.0	7/18/2013	RUN CASING TO SHOE @ 3807' TO 4021', RUN CAS					JME, WASH CASING FROM					
				2								
QEP Ener	gy Company	ciecci), mer den a sweep (Dan et al 11/10). He	Pa	ge 1/1			Report Printed: 8/19/2013					

API Well Number: 43047523270000



**DIRECTIONAL DRILLING SPECIALISTS** 

# **QEP Energy Services**

Red Wash RW 23-23B Pad RW 5C4-23B

RW 5C4-23B

Design: RW 5C4-23B

# **Standard Survey Report**

21 August, 2013





#### **Native Navigation**

Survey Report



Company: Project:

QEP Energy Services Red Wash

Sife: RW 23-23B Pad Well: RW 5C4-23B Wellbore: RW 5C4-23B RW 5C4-23B Design:

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method: Database:

Well RW 5C4-23B

RKB @ 5648.10usft (SST 54) RKB @ 5648.10usft (SST 54)

True

Minimum Curvature Compass DB Connection

Project

Map Zone:

Red Wash

Map System: Geo Datum:

US State Plane 1983 North American Datum 1983

Utah Central Zone

System Datum:

Mean Sea Level

Using geodetic scale factor

Site

RW 23-23B Pad

Site Position: From: Position Uncertainty:

Map

Northing: Easting:

7,246,686.310 usft 2,256,158.369 usft

Latitude: Longitude:

40 193199 -109.295575

0.00 usft

Slot Radius:

13-3/16 "

**Grid Convergence:** 

1.41 °

Well Well Position RW 5C4-23B

+N/-S +E/-W 0.00 usft 0.00 usft 0.00 usft Northing: Easting: Wellhead Elevation: 7,246,460.485 usft 2,255,990.631 usft 5,625.30 usft Latitude: Longitude: Ground Level:

40.192591 -109.296195 5,625.30 usft

Position Uncertainty Wellbore

RW 5C4-23B

Magnetics **Model Name** Sample Date

IGRF2010

4/10/2013

Declination (°) 10.78

Dip Angle (°) 66.02

Field Strength (nT)

281.30

52,275

Design

RW 5C4-23B

Audit Notes:

Version:

1.0

Phase:

ACTUAL

+N/-S

(usft)

0.00

0.00

0.15

0.23

0.40

0.78

1.19

1.09

0.62

0.00

+N/-S

(usft)

0.00

Tie On Depth:

0.00

Vertical

Section

(usft)

0.00

0.00

0.63

0.96

1.11

1.44

2.24

2.48

1.58

+E/-W

(usft)

Direction (°)

Build

Rate

(°/100usft)

0.00

0.00

0.34

-0.65

0.11

0.22

0.33

-0.22

0.21

Turn

Rate

(°/100usft)

0.00

0.00

0.00

-5.32

71.21

-32.97

-28.22

-164.35

0.00

Vertical Section:

Survey Program From

(usft)

22.80

Measured

Depth

(usft)

RKB 168.00

0.00

22.80

230 00

321.00

688.00

To

(usft)

Inclination

(°)

0.00

0.00

0.50

0.10

0.20

0.40

0.70

0.50

0.70

Survey (Wellbore)

Azimuth

(°)

Date 8/21/2013

3,802.00 RW 5C4-23B Surface Svys (RW 5C4-23B

Vertical

Depth

(usft)

0.00

22.80

168.00

230.00

321.00

412.00

501.99

593.99

687.98

**Tool Name** 

Description MWD - Standard

3,852.00 Survey

11,197.00 RW 5C4-23B Prod Svys (RW 5C4-23B)

0.00

0.00

284.10

280.80

345.60

315.60

290.20

139.00

105.40

Depth From (TVD)

(usft)

NN MWD NN MWD

+E/-W

(usft)

0.00

0.00

-0.61

-0.93

-1.05

-1.31

-2.04

-2.31

-1.49

MWD - Standard

Dogleg

Rate

(°/100usft)

0.00

0.00

0.34

0.65

0.20

0.27

0.42

1.26

0.42

412.00 502.00 594.00

8/21/2013 3:07:41PM

Page 2

-35.74 COMPASS 5000.1 Build 58



## **Native Navigation**

Survey Report



Company: Project: Site:

Well:

Design:

QEP Energy Services

Red Wash RW 23-23B Pad RW 5C4-23B RW 5C4-23B Wellbore:

RW 5C4-23B

Local Co-ordinate Reference: TVD Reference:

MD Reference: North Reference:

Survey Calculation Method: Database:

Well RW 5C4-23B

RKB @ 5648.10usft (SST 54) RKB @ 5648.10usft (SST 54)

Minimum Curvature Compass DB Connection

Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth (usft)	Inclination (°)	Azimuth (°)	Depth (usft)	+N/-S (usft)	+E/-W (usft)	Section (usft)	Rate (°/100usft)	Rate (°/100usft)	Rate (°/100usft)
779.00	1.00	278.40	778.98	0,59	-1.74	1.82	1.86	0.33	190.11
871.00	4.70	293.60	870.85	2.22	-5.99	6.30	4.07	4.02	16.52
963.00	6.60	296.20	962.40	6.06	-14.18	15.10	2.08	2.07	2.83
1,059.00	6.90	295.00	1,057.74	10.93	-24.36	26.03	0.35	0.31	-1.25
1,154.00	8.40	299.10	1,151.89	16.72	-35,60	38.18	1.68	1.58	4.32
1,249.00	9.10	285.50	1,245.79	22.10	-48.90	52.28	2.29	0.74	-14.32
1,345.00	10.80	290.40	1,340.35	27.27	-64.65	68.74	1.98	1.77	5.10
1,440.00	12.70	282.00	1,433.36	32.54	-83.21	87.97	2.69	2.00	-8.84
1,536.00	14.60	282.80	1,526.64	37.42	-105.33	110.62	1.99	1.98	0.83
1,631.00	16.80	282.40	1,618.09	43.02	-130.42	136.32	2.32	2.32	-0.42
1,726.00	17.40	287.70	1,708.90	50.29	-157.36	164.16	1.76	0.63	5.58
1,822.00	17.00	289.00	1,800.60	59.22	-184.30	192.33	0.58	-0.42	1.35
1,917.00	19.40	293.60	1,890.85	70.06	-211.90	221.52	2.94	2.53	4.84
2,012.00	19.70	290.70	1,980.38	82.04	-241.34	252.73	1.07	0.32	-3.05
2,108.00	19.90	290.90	2,070.70	93.59	-271.74	284.80	0.22	0.21	0.21
2,203.00	20.30	288.20	2,159.92	104.50	-302.50	317.11	1.06	0.42	-2.84
2,298.00	19.50	292.50	2,249.25	115.72	-332.80	349.02	1.76	-0.84	4.53
2,393.00	19.00	290.60	2,338.94	127.22	-361.93	379.84	0.84	-0.53	-2.00
2,488.00	16.00	288.70	2,429.53	136.87	-388.81	408.09	3.21	-3.16	-2.00
2,582.00	15.70	285.00	2,519.96	144.31	-413.37	433.63	1.12	-0.32	-3.94
2,678.00	17.30	286.10	2,612.00	151.63	-439.63	460.82	1.70	1.67	1.15
2,773.00	17.00	285.10	2,702.78	159.17	-466.61	488.75	0.44	-0.32	-1.05
2,869.00	15.70	283.40	2,794.89	165.83	-492.79	515.73	1.44	-1.35	-1.77
2,963.00	15.00	281.00	2,885.54	171.10	-517.11	540.61	1.01	-0.74	-2.55
3,058.00	16.50	282.70	2,976.97	176.41	-542.34	566.39	1.65	1.58	1.79
3,154.00	18.50	287.10	3,068.53	183.89	-570.20	595.17	2.50	2.08	4.58
3,250.00	20.10	286.70	3,159.13	193.11	-600.56	626.75	1.67	1.67	-0.42
3,345.00	21.10	286.20	3,248.06	202.57	-632.61	660.04	1.07	1.05	-0.53
3,440.00	23.40	285.40	3,335.98	212.35	-667.23	695.90	2.44	2.42	-0.84
3,539.00	22.50	284.30	3,427.14	222.25	-704.54	734.43	1.01	-0.91	-1.11
3,633.00	25.00	281.70	3,513.17	230.72	-741.42	772.26	2.88	2.66	-2.77
3,729.00	22.50	277.80	3,601.04	237.33	-779.50	810.89	3.07	-2.60	-4.06
3,802.00	21.10	275.60	3,668.82	240.51	-806.41	837.90	2.22	-1.92	-3.01
TD - Tie into	Surface								
3,852.00	22.10	278.40	3,715.31	242.76	-824.68	856.25	2.87	2.00	5.60
3,947.00	22.50	278.30	3,803.21	248.00	-860.34	892.25	0.42	0.42	-0.11
4,042.00	20.10	289.00	3,891.74	255.94	-893.78	926.60	4.80	-2.53	11.26
4,136.00	20.90	288.40	3,979.79	266.49	-924.96	959.25	0.88	0.85	-0.64
4,230.00	19.70	290.90	4,067.95	277.44	-955.68	991.51	1,57	-1.28	2.66
4,324.00	16.90	292.30	4,157.19	288,28	-983.12	1,020.55	3.02	-2.98	1.49
4,419.00	16.30	289.00	4,248.23	297.86	-1,008.50	1,047.31	1.18	-0.63	-3.47
4,513.00	14.40	290.70	4,338.87	306.28	-1,031.91	1,071.92	2.08	-2.02	1.81
4,607.00	12.20	287.50	4,430.35	313.40	-1,052.32	1,093.33	2.47	-2.34	-3.40

8/21/2013 3:07:41PM

Page 3

COMPASS 5000.1 Build 58



RW 5C4-23B

# **Native Navigation**

Survey Report



Company: Project:

Design:

QEP Energy Services

Red Wash RW 23-23B Pad Site: Well: RW 5C4-23B Wellbore: RW 5C4-23B

Local Co-ordinate Reference:

TVD Reference: MD Reference:

Survey Calculation Method:

Database:

Well RW 5C4-23B

RKB @ 5648.10usft (SST 54) RKB @ 5648.10usft (SST 54)

Minimum Curvature Compass DB Connection

	Mark to								
Measured Depth (usft)	i Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,701.	00 10.50	279.60	4,522.51	317.82	-1,070.24	1,111.77	2.45	-1.81	-8.40
4,796.	00 11.30	279.70	4,615.80	320.83	-1,087.95	1,129.72	0.84	0.84	0.11
4,890.	00 10.90	279.30	4,708.04	323.82	-1,105.80	1,147.81	0.43	-0.43	-0.43
4,985.	00 11.20	278.20	4,801.28	326.59	-1,123.80	1,166.00	0.39	0.32	-1.16
5,079.	00 11.70	279.90	4,893.41	329.53	-1,142.22	1,184.64	0.64	0.53	1.81
5,173.	00 10.50	265.50	4,985.67	330.49	-1,160.15	1,202.42	3.20	-1.28	-15.32
5,268.	00 10.70	271.90	5,079.05	330.11	-1,177.60	1,219.45	1.26	0.21	6.74
5,362.	00 9.70	268.10	5,171.56	330.13	-1,194.23	1,235.77	1.28	-1.06	-4.04
5,455.	00 11.40	281.00	5,263.00	331.63	-1,211.09	1,252.59	3.12	1.83	13.87
5,550.	00 12.90	274.90	5,355.87	334.32	-1,230.87	1,272.52	2.08	1.58	-6.42
5,645.	00 18.90	278.00	5,447.20	337.37	-1,256.70	1,298.44	6.38	6.32	3.26
5,739.	00 19.00	275.90	5,536.10	341.07	-1,287.00	1,328.88	0.73	0.11	-2.23
5,834.	00 19.40	274.10	5,625.82	343.78	-1,318.12	1,359.93	0.75	0.42	-1.89
5,928.	00 18.10	279.90	5,714.84	347.41	-1,348.08	1,390.02	2.42	-1.38	6.17
6,022.	00 18.80	277.90	5,804.01	352.00	-1,377.47	1,419.73	1.00	0.74	-2.13
6,116.	00 17.10	283.50	5,893.43	357.31	-1,405.91	1,448.67	2.58	-1.81	5.96
6,211.	00 15.50	284.80	5,984.61	363.82	-1,431.77	1,475.30	1.73	-1.68	1.37
6,305.		283.50	6,075.02	370.10	-1,456.74	1,501.01	0.93	0.85	-1.38
6,400.		283.30	6,166.75	375.82	-1,480.73	1,525.66	2.63	-2.63	-0.21
6,494.	00 14.50	281.10	6,257.90	380.67	-1,503.19	1,548.64	0.94	0.74	-2.34
6,589.	00 12.00	279.30	6,350.36	384.55	-1,524.61	1,570.40	2.67	-2.63	-1.89
6,683.	00 10.00	277.10	6,442.63	387.14	-1,542.35	1,588.31	2.17	-2.13	-2.34
6,778.	00 9.80	274.30	6,536.22	388.77	-1,558.60	1,604.56	0.55	-0.21	-2.95
6,872.	00 9.50	273.20	6,628.89	389.80	-1,574.32	1,620.18	0.37	-0.32	-1.17
6,967.	00 11.60	269.50	6,722.28	390.16	-1,591.70	1,637.29	2.32	2.21	-3.89
7,061.	00 11.60	270.10	6,814.36	390.09	-1,610.60	1,655.82	0.13	0.00	0.64
7,155.	00 9.30	274.00	6,906.79	390.64	-1,627.63	1,672.62	2.56	-2.45	4.15
7,250.	00 8.60	271.20	7,000.64	391.32	-1,642.39	1,687.23	0.87	-0.74	-2.95
7,344.	00 9.10	280.80	7,093.52	392.86	-1,656.72	1,701.58	1.66	0.53	10.21
7,439.	00 8.50	279.40	7,187.40	395.42	-1,671.03	1,716.11	0.67	-0.63	-1.47
7,533.	00 8.30	288.70	7,280.40	398.73	-1,684.31	1,729.79	1.46	-0.21	9.89
7,627.	00 9.10	289.00	7,373.32	403.32	-1,697.77	1,743.88	0.85	0.85	0.32
7,721.	00 7.50	286.30	7,466.33	407.46	-1,710.68	1,757.36	1.75	-1.70	-2.87
7,815.	00 8.90	280.30	7,559.37	410.48	-1,723.73	1,770.74	1.74	1.49	-6.38
7,910.	00 7.50	274.20	7,653.40	412.25	-1,737.14	1,784.24	1.73	-1.47	-6.42
8,005.	00 6.80	275.10	7,747.66	413.21	-1,748.93	1,795.99	0.75	-0.74	0.95
8,099.	00 5.70	270.50	7,841.10	413.74	-1,759.14	1,806.10	1.28	-1.17	-4.89
8,194.	00 3.80	273.30	7,935.77	413.96	-1,767.00	1,813.86	2.01	-2.00	2.95
8,288.	00 3.60	273.00	8,029.57	414.30	-1,773.06	1,819.86	0.21	-0.21	-0.32
8,383.	.00 5.30	288.10	8,124.28	415.82	-1,780.21	1,827.17	2.16	1.79	15.89
8,477.	00 4.00	275.50	8,217.98	417.48	-1,787.60	1,834.74	1.75	-1.38	-13.40
8,572.	00 3.30	261.60	8,312.78	417.40	-1,793.60	1,840.61	1.18	-0.74	-14.63
8,666.	00 2.90	249.10	8,406.65	416.16	-1,798.50	1,845.17	0.83	-0.43	-13.30
8,761.	.00 2.90	247.30	8,501.53	414.37	-1,802.96	1,849.20	0.10	0.00	-1.89

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## **Native Navigation**

Survey Report



Company: Project: Site:

Wellbore:

Design:

Well:

QEP Energy Services Red Wash

RW 23-23B Pad RW 5C4-23B RW 5C4-23B RW 5C4-23B Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method: Database: Well RW 5C4-23B

RKB @ 5648.10usft (SST 54) RKB @ 5648.10usft (SST 54)

True

Minimum Curvature Compass DB Connection

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,855.00	2.70	236.60	8,595.41	412.23	-1,807.00	1,852.75	0.59	-0.21	-11.38
8,949.00	2.70	226.70	8,689.31	409.50	-1,810.46	1,855.60	0.50	0.00	-10.53
9,044.00	2.70	213.20	8,784.21	406.09	-1,813.31	1,857.73	0.67	0.00	-14.21
9,138.00	2.40	201.90	8,878.11	402.41	-1,815.26	1,858.92	0.62	-0.32	-12.02
9,130.00	2.60	187.90	8,972.02	398.47	-1,816.29	1,859,16	0.68	0.21	-14.89
9,232,00	2.60	167.90	0,912.02	390,47	-1,010.29	1,009.10	0.00	0.21	-14.09
9,327.00	3.40	174.30	9,066.90	393,54	-1,816.30	1,858.21	1.12	0.84	-14.32
9,422.00	3.30	164.10	9,161.73	388.10	-1,815.28	1,856.13	0.64	-0.11	-10.74
9,516.00	3.10	170.00	9,255.59	383.00	-1,814.09	1,853.97	0.41	-0.21	6.28
9,611.00	1.90	119.00	9,350.51	379.70	-1,812.27	1,851.54	2.54	-1.26	-53.68
9,706.00	2.20	75.50	9,445.45	379.40	-1,809.13	1,848.40	1.63	0.32	-45.79
9,793.00	1.30	70.90	9,532.41	380.14	-1,806.58	1,846.04	1.05	-1.03	-5.29
9,888.00	1.10	63.30	9,627,39	380.90	-1,804.74	1,844.39	0.27	-0.21	-8.00
9,982.00	1.10	77.80	9,721.37	381.50	-1,803.06	1,842.86	0.30	0.00	15.43
10,077.00	1.20	73.20	9,816.35	381.98	-1,801.21	1,841.14	0.14	0.11	-4.84
10,171.00	1.20	80.30	9,910.33	382.43	-1,799.30	1,839.35	0.16	0.00	7.55
10,266.00	1.20	104.50	10,005.31	382.35	-1,797.36	1,837.43	0.53	0.00	25.47
10,360.00	1.50	138.70	10,099.29	381.18	-1,795.59	1,835.47	0.90	0.32	36.38
10,455.00	2.50	147.40	10,194.23	378.50	-1,793.65	1,833.05	1.10	1.05	9.16
10,549.00	2.60	157.20	10,288.13	374.80	-1,791.72	1,830.43	0.48	0.11	10.43
10,643.00	2.80	146.70	10,382.03	370.92	-1,789.64	1,827.62	0.57	0.21	-11.17
10,738.00	3.00	142.70	10,476.91	367.00	-1,786.86	1,824.13	0.30	0.21	-4.21
10,832.00	3.20	133.20	10,570.77	363.25	-1,783.45	1,820.06	0.59	0.21	-10.11
10,926.00	2.80	124.90	10,664.64	360.14	-1,779.66	1,815.73	0.63	-0.43	-8.83
11,021.00	2.20	126.80	10,759.55	357.72	-1,776.29	1,811.95	0.64	-0.63	2.00
11,115.00	2.60	136.40	10,853.47	355.09	-1,773.38	1,808.58	0.60	0.43	10.21
11,197.00	2.60	136.40	10,935.39	352.40	-1,770.81	1,805.54	0.00	0.00	0.00

Me	asured	Vertical	Local Coo	rdinates		
	epth usft)	Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment	
	22.80	22.80	0.00	0.00	RKB	
	3,802.00	3,668.82	240.51	-806.41	TD	
	3,802.00	3,668.82	240.51	-806.41	Tie into Surface	
1	1,197.00	10,935.39	352.40	-1,770.81	Proj @ TD	

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Checked By:	Approved By:	Date:

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